John Cranford,
M. D.

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THE

MEDICAL AND PHYSICAL JOURNAL,

CONTAINING THE

EARLIEST INFORMATION ON SUBJECTS

OF

MEDICINE, SURGERY,

PHARMACY, CHEMISTRY,

AND

NATURAL HISTORY;

AND A

CRITICAL ANALYSIS OF ALL NEW BOOKS

IN THOSE

DEPARTMENTS OF LITERATURE.

CONDUCTED BY

T. BRADLEY, M.D.

Member of the Royal College of Physicians, London; Physician to the Westminster Hospital, and to the Asylum for Female Orphans; Lecturer on the Theory and Practice of Medicine, &c.

BY

R. BATTY, M.D.

Licentiate in Midwifery, of the Royal College of Physicians, London; of the British Lying-In-Hospital; Physician to the Infant Asylum; Fellow of the Linnean Society; and Lecturer on Midwifery.

AND BY

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Vice-Secretary of the Physical Society at Gottingen; Corresponding Member of the Linnean Society, London; and of the Medical Society at Paris.

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VOL. IV.

FROM JUNE TO DECEMBER, 1800.

LONDON:

Printed for R. PHILLIPS, No. 71, St. Paul's Church-Yard; and sold by all Booksellers in the United Kingdoms.

Price Twelve Shillings in Boards.

[William Thorne, Printer, Red Lyon Court, Fleet Street.]

5798

[Entered at Stationers Hall.

Crawford

ADVERTISEMENT.

IT is unnecessary for us to enumerate the advantages the World derives from the different branches of Medicine. The state of health enjoyed by most human beings, at some period or other of their lives, impresses this fact too forcibly on their minds to render it a subject of doubt. To most of the readers of the Medical and Physical Journal, who are probably members of the Faculty, still less need be said on this subject, every practitioner being thoroughly convinced that much real benefit is daily arising from those who lose no opportunity of acquiring information, and immediately applying the skill and discoveries of their brethren to the best advantage.

We trust that our endeavours in so widely diffusing the aggregate labours of individuals have contributed materially to this desirable end; indeed, if we may be allowed to judge from the flattering testimonies we daily receive from our Correspondents, and from the circulation which the Medical and Physical Journal now universally has through the Navy and Army, we are confident that the benefits accruing to our brave champions and defenders must be inestimable, and the improvement in Naval and Military Physic and Surgery incalculable.

In retracing the various subjects in this Volume, our readers will agree with us, that very valuable additions have been made to our knowledge of the Cow-pock; that its discussion in our Journal has extended the benefits of this discovery to the world; and the minute inquiry into some occasional irregularities attending it, has led to a certain mode of practice, securing the happy effects mankind are taught to expect from it.

On the practice of Midwifery, and on the management of the Placenta, we are persuaded that considerable benefit must result from the valuable communications and practical remarks we have inserted on this important branch of medicine.

We are glad to observe that Physicians are now adopting the affusion of cold water in the hot stage of fever, a practice introduced by the ingenious and learned Dr. Currie, who is entitled to the thanks of the Faculty for a powerful remedy, and precise rules for its application; on this head we have conveyed some additional

ditional testimonies to its safety and efficacy. — On the subject of Pulmonary Consumption, and the exhibition of Digitalis, we are led to hope for cures in an almost hopeless class of maladies; and although we may be occasionally disappointed in our expectations of its certainly fulfilling our wishes, it is undoubtedly a powerful agent; and when more experiments and facts shall be collected, and more precision is observed in its preparation and exhibition, we are convinced the profession, as well as the community, will not only reap the fruits of it, but confess their obligation to those who have brought it into notice.

We also trust that the public will eventually derive benefit from our communications on Cancer, and the discussion it has given rise to. — If, as yet, many new facts are not added to our stock; if we are still necessitated to have recourse to palliatives, and the feeble practice of prescribing solely to the most urgent symptoms; if we have not yet actually established a just theory, or discovered an efficacious remedy for this dreadful disease, — we are glad to find that bold assertions are received with proper caution; that statements of cases are carefully scrutinized and cross-examined; that men of science are eager to unveil mystery, and afford the world and suffering humanity, a fairer opportunity of estimating what degree of confidence may be placed on superior pretensions, or on partial and ambiguous representations of facts. However, if it be true that civil convulsions call forth unexampled energies and unexpected abilities, and if the blaze of truth is frequently elicited from the collision of jarring opinions, we have a right to hope that a full and severe investigation of the pathology and supposed remedies of this horrible disease will at last reward us for the search.

The state of science at the close of the eighteenth century gives us a good claim to our expectations. Deep anatomical and physiological knowledge are not now confined to one or two Professors at our Universities; EVERY PRACTITIONER *must lay a sound foundation of the principles of Medicine, to stand in fair competition with his cotemporaries; and we sincerely rejoice that the very extensive circulation of the Medical and Phyfical Journal so evidently facilitates the communication of information, and tends so rapidly and effectually to the improvement of the healing art.*

LONDON, DEC. 13, 1800.

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THE

Medical and Physical Journal.

VOL. IV.] JULY, 1800. [NO. XVII.

To Dr. BRADLEY.

DEAR SIR,

IN a former Number of the Medical Journal, you did me the favour to insert a paper, giving an account of a fact relative to the Gloucestc. Militia, which went to prove, that those persons who had been infected with the Cow-pox, could not afterward be infected with the Small-pox. Since that time, there have been spread many vague reports of cases, in which it was asserted, that several persons who had been inoculated for the Cow-pox had, afterward, been actually infected with the Small-pox. Presuming that some error in the nature of the matter inoculated, or in the conduct of the operation, must have been the cause of such opposite conclusions, (if there was any foundation for the reports) I take the liberty of sending you a copy of a letter, with which I was honoured, from a nobleman of distinguished worth and respectability. His Lordship could not be mistaken in his observation of what passed when his own children were inoculated for the Cow-pox; and yet, the circumstance related, may disclose the causes of these very different opinions and assertions. Nor could his Lordship have any other motive for condescending to make this communication, but what was most humane and liberal.

When the practice of inoculating for the Small-pox was first introduced into this country, and even within my memory, many were the objections made to it, for religious, moral, and medical reasons; and the disputes which arose between the favourers and opposers of the practice, were liberally and judiciously supported. But all the objections being founded in speculation or opinion, have yielded to the authority of facts and experience, and they are now almost forgotten; though the contention taught to medical men, the necessity of great care and circumspection in every step they took. But with regard to the Cow-pox, for our whole knowledge of which we are exclusively obliged to *Dr. Jenner*, I have not heard any reason, nor seen or known any fact, that has induced me to

change my opinion, or to raiſe any doubt, but that many and great advantages will be derived from the introduction of the practice of inoculating for it; the force of every argument urged, and the ſpirit of all the wit employed againſt it, lying in the ſingle word *beſtial.* I remain,

DEAR SIR,
Your very humble ſervant,
T. DENMAN.

Old Burlington Street,
May 29, 1800.

LORD DERBY to Dr. DENMAN.

DEAR SIR,

I have great pleaſure in ſending you as exact an account as I can give, of a circumſtance which occurred when my two children were inoculated for the Cow-pox; and if you think the knowledge of it may prevent any dangerous conſequences to others, you have my permiſſion to make it public.

April 30,—the children, one of which was fourteen months and the other two months old, were inoculated for the Cow-pox, by Mr. Knight, from the arm of a child which had alſo been inoculated by him. On the next morning, the arm of the elder child was much inflamed, and in a few hours a ſmall veſicle appeared on the punctured part, which ſo nearly reſembled the appearance we had been taught to expect, that we concluded ſhe had received the infection. When Mr. Knight viſited the child, he expreſſed many doubts, becauſe, as I underſtood, the inflammation ſo ſpeedily followed the operation. Theſe doubts were ſoon converted into certainty, as in a ſhort time the inflammation ſubſided, and a ſlight incruſtation was formed on the veſicle, which he aſſured me had not the true character of the Cow-pox; though I was, and many others not converſant with the diſeaſe might have been, miſled by the appearance. On the Monday following, ſhe was inoculated in both arms, with matter taken from a different ſubject; and this was followed by a ſucceſſion of preciſely the ſame appearances as thoſe above deſcribed. On Wedneſday, ſhe was again inoculated from the arm of her brother, in whom the diſeaſe had gone on ſatisfactorily from the firſt inoculation. This third inoculation ſucceeded completely, the arm obſerving the ſame courſe as that of her brother. Neither of the children had the ſmalleſt appearance of fever or indiſpoſition during the whole proceſs. I am,

With great regard, &c.
DERBY.

Groſvenor Square,
May 23, 1800.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

THE pleaſure and information derived by the Faculty from your very intereſting periodical publication, merits their acknowledgement; and as opinions will ſometimes very manifeſtly differ with reſpect to the treatment of particular caſes, and occaſionally with propriety, yet, although candour impoſes your ſilence, and in ſome ſort prevents your animadverſions, a diſcriminating public will approve or cenſure ſuch as militate againſt the ſoundeſt practice, and beſt authorities: Through the ſame medium, I beg leave to offer an opinion reſpecting the manual or forcible delivery of the placenta, ſo ſtrongly recommended and enforced by ſeveral profeſſional gentlemen in two or three of your laſt Medical Journals.

Having practiſed midwifery for full twenty-five years upon a very extenſive ſcale, and, I flatter myſelf, with as much ſucceſs as moſt men, during which period a variety of caſes have preſented themſelves, wherein ſuch a practice *might* have been thought expedient; but, from long experience, I am taught to believe firmly, that in nineteen caſes out of twenty, more danger and miſchief would be induced than obviated by ſuch attempts, rather than by ſubmitting the buſineſs to Nature.

The following caſe, at an early period of my practice, awakened my apprehenſion of the danger of the manual extraction, and influenced my conduct ever after; except in the moſt urgent caſe, as it *then* appeared. — I was called to a gentlewoman in labour of her third child, who had for three or four years been ſubject to fainting fits, (not of the epileptic or convulſive kind) and had had them occaſionally during her former labours, without any farther ill conſequences than retarding their progreſs in ſome degree, having always had long, ſlow, and very painful labours, though perfectly natural before. A preſentation of a portion of the funis in this caſe had taken place immediately upon the rupture of the membranes, before I reached my patient, at ſome miles diſtance from me, who had a midwife with her. Finding a good pulſation, I was induced to return the funis, which I effected, per digitale, (abſente dolore) and a ſingle blade of the forceps, with which, in almoſt every caſe of ſuch preſentation, I have ſucceeded, with perfect ſafety to the mother and child: the labour advanced ſafely, though ſlowly afterwards, and ſhe was in eight or ten hours delivered of a fine living child; immediately almoſt

after which, a considerable hæmorrhage ensued, but ceased soon upon the application of cold vinegar and water and brandy, with an opiate, together with her syncope, which had occurred twice before during her labour. Being extremely anxious for the safety and preservation of my patient, under the above pressing circumstances, upon her recruiting, an hour after finding no advance, by gentle efforts at the funis during little paroxysms of pain, I was induced (as I then thought justifiably), as well as by the intreaty of my patient and by-standers, to extract the placenta, (manus introductione) which in the most cautious and gentle manner I separated through the hour-glass contraction of the uterus, as is usual, with little or no effusion; but a few minutes after, a sudden, though apparently not profuse, hæmorrhage took place, which produced the usual syncope, from which she never recovered.

The unpleasant suggestion upon this occasion, that probably my patient might have survived, if the business had been left to Nature, impressed and reproached me for officious zeal.

The case quoted by Mr. Wagstaff, (no. xv.) although it terminated safely, yet, from the circumstances therein mentioned, it appeared officious, and would obviously have proved equally so, if left to Nature, a few hours afterwards.

Mr. Davies's case (no. xi.) clearly proves the non-necessity likewise of manual or *forcible* delivery; for, if it is ever expedient, which *may* be the case, the most cautious and gradual separation ought to take place, not only to obviate hæmorrhage and inflammation, but the truly formidable mischief of inversio vel prolapsus uteri, which proves too frequently the consequence of the rough and rude hand of haste and ignorance, more especially of half-informed women midwives, an occurrence that I have several times met with, to the great sorrow and discomfort of many a valuable woman ever after. How guarded, therefore, ought gentlemen to be, in recommending and sanctioning a practice pregnant with so much mischief.

Mr. Peck's advice (in no. xiii.) seems still more exceptionable than the former, in recommending the practice of forcible extraction invariably, if a spontaneous delivery does not succeed in ten or fifteen minutes.

The successful termination of Dr. Scott's case, (no. xv.) by no means justified the hazardous attempts, in the extremely reduced state of his patient; more time given for her to recruit, an opiate, and frigid applications, would in a few hours, most probably, have induced a spontaneous separation, as I have repeatedly experienced.

I was much pleased to see in your last Number of the Medical Journal, some very judicious and pertinent remarks upon

upon this ſubject by Dr. Squire, a reſpectable practitioner and teacher of Midwifry, wherein he ably combated the arguments advanced by the foregoing advocates for the practice, and inſtanced a variety of cogent reaſons, as well as the higheſt authorities, againſt it; at the ſame time I was about tranſmitting theſe remarks, annexing many of the truly reſpectable authorities he has quoted againſt the practice, which now it is needleſs to recapitulate, therefore I ſhall only beg leave to corroborate what he has advanced on the ſubject, as from conſiderable practice and obſervation I am perfectly convinced of the propriety and rectitude of his advice, and ſhall be happy to ſee his further future obſervations on the management of the placenta, &c. which he announces is his intention of giving to the public; and am,

GENTLEMEN,
With much reſpect,
Your obedient humble ſervant,
J. SYER.

Melton, Suffolk,
May 29, 1800.

Obſervations on the Belladonna.

By THOMAS WAINWRIGHT, Member of the Royal College of Surgeons in London.

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

THE account publiſhed in your Journal for April, page 367, of the effects of the belladona applied to the eyes, previous to their being operated on for the cataract, induces me to trouble you with a few obſervations on the medical uſe of this plant.

Ray has related a caſe, where, from the application of the green leaf of the belladonna to the eye, the iris became ſo affected, that the pupil would not contract even in the brighteſt light. The leaf being removed, the eye was gradually reſtored to its former ſtate; and this was repeated three ſeparate times. It does not ſeem to have been known, that the dilatation of the pupil and paralytic ſtate of the iris, invariably followed the free application of the belladonna to the eye.

Twelve

Twelve years ago I became acquainted with this fact, from accidental and perſonal experience; and in 1791, I mentioned this remarkable effect of the belladonna to the Phyſical Society of Guy's, and at the ſame time ſtated my expectation, that advantage would ariſe from its application in certain diſeaſes of the eye. I have been in the habit of applying the juice and the extract of the belladonna diluted with water, very freely, in many caſes of inflammation of the eye for ſeveral years. In almoſt every inſtance where the belladonna has been brought in contact with the cornea, the pupil gradually dilates, and the iris becomes leſs and leſs ſenſible to the ſtimulus of light. The degree of dilatation can very much be regulated at pleaſure, by repeating the application; in ſome inſtances, the iris has almoſt diſappeared, and temporary loſs of viſion enſued: the uſe of the belladonna collyrium has been continued through one and two weeks. When the belladonna is diſcontinued, the eye in every inſtance is reſtored to its natural ſtate; the iris recovers its ſenſibility in about twenty-four or forty-eight hours. The application of the belladonna has leſs effect on the eyes of ſome; and in ſeveral diſeaſes of the eye, the pupil is not ſo readily dilated by it. The uſe of the belladonna does not in any way weaken or injure the ſight; on the contrary, I have thought that a moderate artificial dilatation has, in my own caſe, rendered my viſion ſtronger and more ſteady; and that the glare of ſun-ſhine has been leſs offenſive to me. There is no doubt on my mind, but that the external uſe will be found greatly to facilitate the operations for the cataract. The belladonna collyrium is ſerviceable in acute inflammations of the eye, and in inflammations ariſing from external violence; in the ſcrofulous opthalmia it has, with me, had no good effect; and it has alſo failed in an opthalmia, which afterwards turned out to be venereal. Specks, attended with conſiderable inflammation, were in two inſtances removed, by repeatedly inſinuating the extract of the belladonna under the eye-lids: the expreſſed juice diluted with water, is more effectual than a ſolution of the extract in water. I have thought the belladonna lotion more efficacious in caſes where the pupil is to be quickly dilated from its uſe. The beauty of the berries of this plant, has frequently led children to eat them in conſiderable quantities; and in ſeveral inſtances, twelve and even twenty-four hours have elapſed before any medicine has been exhibited, and the berries have continued to be voided by ſtool during two and three days; yet, I have not heard of any caſe which has terminated fatally:—the berries do not appear to be ſo deleterious as the leaves. From a very free application of the diluted extract of the belladonna to an eryſipelas of the leg,

leg, attended with excoriations, the pupil became dilated, with irritability of the iris, and temporary blindneſs, with pain of the head, convulſive twitchings, and that peculiar idiotic derangement of the mind, which ariſes from the belladonna having been taken into the ſtomach in improper quantities.

The belladonna has been given internally, joined with calomel and tartar emetic, in obſtinate caſes of chronic rheumatiſm, in certain cutaneous eruptions, and in cafes of ulcers and of tumours threatening to become cancerous, with good effect. Temporary amendment has followed its uſe in cancer; half a grain of the extract is a full doſe, and ſhould be repeated night and morning, or thrice a day, till the pupil is ſomewhat dilated: the dilatation of the pupil is an excellent criterion of a full doſe. The medicine ſhould not be puſhed further, but this effect be kept up. It is a great error to give medicine in too large doſes; and it has been well obſerved, that medicines, given in very large doſes, often loſe their peculiar effects, and act as mere ſtimulants. I am,

GENTLEMEN,

Your very obliged humble ſervant,

Dudley, June 14, 1800. T. WAINWRIGHT.

INOCULATION.

AT a time when the Vaccine Inoculation is nearly eſtabliſhed in this iſland, and when it has made a conſiderable progreſs in Ireland and on the continent, it may gratify the curioſity of many of our readers to be informed what kind of reception the Inoculation of the Small-Pox experienced on its firſt introduction into this kingdom. With this view we preſent them with the following account. In the year 1746, a ſmall pamphlet was publiſhed, intitled,

"*Several Cases in Physic*; *and one in particular, giving an Account of a Person who was inoculated for the Small-Pox, and had the Small-Pox upon the Inoculation, and yet had it again*; *together with two or three other very remarkable Small-Pox Cases, &c.* By PIERCE DOD, M.D. Fellow of the College of Phyſicians, and Phyſician to St. Bartholomew's Hoſpital."

The particular Caſe referred to in the above title-page is given as follows, at page 12 of the pamphlet.

"I did not think to trouble you with any thing more at preſent, but another Small-pox cafe being lately come to my hands, I was unwilling to loſe the opportunity of communicating it.

"It

" It is the caſe of a little boy, ſon to Mr. Richards, member of parliament for Bridport in Dorſetſhire. He was inoculated about three years ago, at the age of about three, and had the Small-pox come out upon him to the number of fifty or ſixty, and they maturated and ſcabbed, and went off in the ſame manner that that ſort of pock, which was a regular and diſtinct one, generally does: But about two years afterwards, *i. e.* about a year ago, he had the Small-pox again, and there came out between two and three hundred, which maturated and ſcabbed likewiſe, and went through the ſame ſtages, and in the ſame manner that the former did, only he was worſe before the eruption; but when that was completed, had no manner of diſorder, except too much of an appetite, as is uſual, every now and then, in and after the Small-pox.

" This is authenticated to me by a letter which I have from a learned and experienced phyſician in thoſe parts, Dr. Broderepp, who is likewiſe grandfather to the child, and attended him upon both occaſions; and, whatever may be ſaid in evaſion of other caſes, in which perſons that have been inoculated have had the Small-pox afterwards, as,—that the inoculation did not take place, there was no eruption, at leaſt no variolous one, and the like,—is certainly an inſtance that *all* is not to be depended upon that is given out in favour of, or is expected from Inoculation; and that it is, by no means, an effectual ſecurity from having the Small-pox again.

" But, as it has been obſerved long ſince by the inimitable author of HUDIBRAS,

> " Surely the pleaſure is as great
> " In being cheated, as to cheat."

or elſe it is impoſſible that Inoculation ſhould triumph ſo much as it is ſaid that it does over all its oppoſers."

This curious pamphlet was anſwered by Kirkpatrick, in the ſame year, with great wit and ſeverity, under the following title:

" *A Letter to the real and genuine Pierce Dod, M. D. actual Phyſician to St. Bartholomew's Hoſpital; plainly expoſing the low Abſurdity or Malice of a late ſpurious Pamphlet, falſely aſcribed to that learned Phyſician: with a full* ANSWER *to the* MISTAKEN *Caſe of a natural Small-pox, after taking it by Inoculation.*"

Theſe two intereſting pamphlets are become very ſcarce; though the latter was afterwards reprinted with the author's real name, and an apology for the ſeverity of ſome of his animadverſions, which he underſtood had diminiſhed Dr. Dod's reputation and practice.

On

On the Perspirable Fluids; *by* Dr. MITCHILL.

From the American Journals we preſent our Readers with the following very ingenious "*Speculations concerning the perſpirable Fluids of Human Bodies.* In a Letter from Dr. MITCHILL to Dr. DUNCAN.

"SIR,

"IN reply to your laſt letter, I have to remark, that, of the fluids afforded by the human body, few have been more talked of, though, perhaps, none to leſs advantage, than thoſe exhalations or effuſions from its ſurface, denominated *perſpiration* or *ſweat.* The reaſon alleged wherefore ſo little has been experimentally done upon theſe fluids or humours, is, that they cannot be obtained in ſufficient quantity; their volatility being ſuch as to prevent the collection of either of them, to ſuch an amount, that much certain information can be obtained about their peculiar natures and qualities.

"This is, indeed, in ſome degree, the caſe; and, without doubt, the difficulty of procuring, conveniently and frequently, parcels of the matter ſecreted from the ſkin, has retarded the progreſs of inquiry on this point. While, therefore, the fluids ſecreted in the liver, pancreas, kidneys, ſtomach, mouth, and almoſt every other part of the human frame, have been examined with great care and exactneſs, experimenters are yet very much behind-hand in their knowledge of the cuticular diſcharge.

"It is not my intention to ſtrike the balance between the proportions of fluids ſecreted by the kidneys and the ſkin, on the one part, nor to adjuſt the difference between the exhalation by arteries or glands, and the inhalation by lymphatics or abſorbents, on the other. My object is, to examine, by ſuch means as, it appears to me, we are poſſeſſed of, what ſubſtances they are which compoſe the cuticular ſecretion in the time of health, what alterations it undergoes by accumulation and confinement in certain caſes, and how peſtilential fluids and fomites may be produced thereby.

"It will not, therefore, be neceſſary to give an anatomical deſcription of the ſkin. All that will be offered will be capable of being comprehended without going into details upon that ſubject. Almoſt all that you need recollect is, that the *true ſkin* is furniſhed with arteries, veins, glands, excretory ducts, and lymphatics, and that it is covered over by a porous ſemi-tranſparent ſort of ſheath, called EPIDERMIS, or CUTI-

CLE, which is *inſenſible*, *bibulous*, and *exceedingly apt to grow dirty*; and this to a conſiderable degree without the conſciouſneſs of the wearer.

" A quantity of oil, ſecreted into the cells of the adipoſe membrane, underlays the true ſkin in moſt parts of the body; and the veſſels and glands concerned in this function combine alſo a portion of the phlogiſton (hydrogen) and carbon of the blood, into a ſebaceous or greaſy compoſition, to anoint and ſoften the cuticle. A portion of this fatty matter, in the time of health, is ſpread over the whole ſurface, though in greater quantity in ſome parts, and at ſometimes, than at others. (Liquor oleoſus—inflammabilis—cutem perungit. *Haller*, 5 Element. Phyſiolog. § 20.) The palms of the hands, the inſides of the fingers, and the ſoles of the feet, are remarked for having the leaſt of it.

" This oily fluid, with which the external ſurface of the body is ſmeared, was found, in the early ſtages of ſociety, while yet dreſs was ſimple, and few or no clothes were worn, to be too copious in ſome conſtitutions, and to collect in greater quantity than the purpoſes of comfort required. When this happened, from its adheſive nature, particles of duſt, and other things floating in the air, would readily ſtick to it, and occaſion ſome degree of unpleaſant ſenſation. To remove this unpleaſantneſs, and the cauſe of it, inſtinct or accident led to the practice of *bathing*, or of purification with *water*; which being not capable of removing completely the foul and greaſy collection, was afterwards quickened in its activity by *alkalies* and *ſoaps*, ſubſtances which experience proved to be very efficacious in ridding the ſkin of its incumbrance. It ſometimes happened, too, that the oily liniment of the ſkin was too ſparingly effuſed, or too quickly removed, and did not impart to the cuticle (which, it will be remembered, has neither nerves nor ſenſibility) that pliancy and ſuppleneſs which is eſſential to pleaſant and perfect feeling. The epidermis was then prone to become horny, to crack, and to induce diſagreeable or painful ſenſation. To relieve this inconvenience, the cuſtom of applying *grease* or *oil* over the ſurface of the body ſeems to have been adopted by mankind likewiſe at a very early period; and in this way the deficiency of the matter of ſecretion was ſupplied by art.

" The uſe of water, and of alkaline lotions, ſometimes rendered more active by being warmed, and the employment of oil and ſoft ointments, now and then aided by *manual friction*, ſeem to have obtained very extenſively, from the mere comfortable effects they wrought, without any reaſoning or theory whatever. Sometimes a perſon employed the *watery* application

tion only, ſometimes the *oily*, and then again he made uſe of *both*, in rapid ſucceſſion.

" But this adipoſe ſecretion is by no means a *pure oil*. According to circumſtances, it is occaſionally blended with *phoſphoric*, *ſulphuric*, *ſeptic*, and a ſurpluſage of *carbonic* matter.

" And it is further altered, as far as its nature will permit, by the conſtant tranſmiſſion of that AQUEOUS FLUID, the INSENSIBLE PERSPIRATION, through the cuticle, and by the drops of SWEAT into which it is ſometimes condenſed; both formed by a coalition of a portion of the phlogiſton (hydrogen) of the blood, with a parcel of its oxygen, and this liquid ſerving as a menſtruum for certain other ſubſtances. The exceedingly great quantity of perſpired matter inceſſantly paſſing off from every exhalant pore of the ſkin, leaves behind, as it evaporates, ſome of its more fixed, ſaline, and feculent parts, along with, or upon, the greaſy covering of the cuticle. A portion of carbon, phoſphorus, and ſepton, with, ſometimes, an overplus of oxygen, ſeem to accompany this effuſion of the ſkin, and, in ſome quantity, to remain behind, after the water has evaporated.

" It was remarked before, that the cuticle was inſenſible, bibulous, and, of courſe, exceedingly apt to grow dirty. How can it be otherwiſe? The cuticle has neither nerves nor blood-veſſels, and there is little or no reaſon to believe that it poſſeſſes organization. It is therefore, in ſtrictneſs, leſs a part of the living body, than a kind of tight ſhirt, or cloſe-ſetting tunic, drawn over the whole ſurface of the body. This ſhirt or tunic of cuticle may be conſidered as a foreign wrapper, or piece of natural clothing; and, like every other foreign thing which enwraps the body, is liable to become charged with ſuch ſubſtances as are excreted from the TRUE SKIN within it. The foulneſs of this NATURAL SHIRT is a frequent occurrence. Almoſt every body lets it get dirty. When the naſtineſs is very conſiderable, the poiſonous or ſtimulant matter entangled there, irritates or inflames the organ of feeling, with which it lies in contact, and produces various itchings, pimples, eruptions, blotches, tetters, ſores, &c. being a PRINCIPAL CAUSE of the diſtempers of the ſkin. To a correct mind, *a dirty cuticle will appear to be a dirty ſhirt.* If the former could be ſtripped off, and cleanſed in the waſh-tub, like the latter, there might poſſibly be a convenience in it. This is, however, of ſmall moment, ſince we know the cuticle can be well cleanſed without being taken off.

" The modern uſe of white linen and cotton, as articles of raiment, enables us to judge, with tolerable accuracy, what material it is, which ſhirts, made of thoſe kinds of cloth, and

worn next the cuticle, receive from the PERSPIRATION and SWEAT. What the garments imbibe muſt have paſſed firſt through the exhalant arteries or excretory ducts, then undergone a further change while remaining in and about the CUTICLE or FIRST SHIRT, and afterwards have been tranſmitted, by rubbing or wiping, to the linen fibres or cotton filaments OF THE SECOND. The animal matter which befouls the OUTER SHIRT is a good indication of that which adheres TO THE INNER. For, as clean linen and cotton become ſoiled very ſoon by lying in contact with any part of the human body, what they receive muſt be principally derived from the cuticle which they touch and abſterge.

" The uncleanneſs of SHIRTS, DRAWERS, and STOCKINGS, may, therefore, be deemed to be matter wiped from the CUTICLE, and derived to the cuticle from the veſſels and ducts of the ſubjacent TRUE SKIN. An examination, then, of the facts relative to clothing grown foul by long wearing next the cuticle, may be conſidered as virtually an examination of the cuticle itſelf, and of the excreted matters which ſtick to it.

" I. One general property of all theſe matters, and of clothes tainted by them, is, that alkaline ſalts and ſoaps will ſeize, neutralize, and extract them; the garments being thereby rendered wholeſome and clean. An unqueſtionable effect of ſuch applications is to remove the *greaſy* or *unctuous* matter communicated to them from the cuticle. But this is not all—The *watery* as well as the *oily* part of the perſpirable matter contains the BASES OF ACIDS. A portion of oxygen combining with this fat material, imparts to it more or leſs of rancidity. Another portion, uniting to carbon, forms carbonic acid, and this, volatilized by heat, is converted into carbonic acid gas. Another portion of the acidifying principle, uniting to the phoſphorus, turns it to phoſphoric acid: while the ſepton (azot), if it happens to combine with caloric alone, flies off in the form of azotic air; or, if it makes a junction with oxygen, conſtitutes, with it, SEPTIC ACID. Oils, being capable of uniting with the ſtronger acids, eſpecially with the ſeptic, and probably, alſo, with the phoſphoric and carbonic, there can be little doubt that theſe acids, or ſome of them, or ſome part of ſome of them, join with the adipoſe matter into a ſort of ACID SOAP, on the cuticle and ſhirt. This acidifying proceſs, whereby carbon, phoſphorus, and ſepton, unite to oxygen, takes place, NOT BEFORE SECRETION, but AFTER the perſpired matter is depoſited on the cuticle, or lodged in the ſhirt. The formation of acids, in this caſe, is not the immediate effect of vital movement at all, but reſults from chemical attraction going on among the particles of the fluids,

AFTER

AFTER EXCRETION, as in other inanimate matter; neither the cuticle, nor the fluids which beſmear and bedew it, having any living energy to controul or modify the laws of chemical action. Hence proceeds that SOUR SMELL from clothes in which ſailors and labouring men have ſweated profuſely, which, though obvious to the ſenſes, and familiar to the wearers and to waſher-women, remains unknown to hardly any body but philoſophers.

[To be continued.]

STATE OF DISEASES IN LONDON.

Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20th of May to the 20th of June, 1800.

	No. of Caſes.
ACUTE DISEASES.	
Typhus mitior	7
Sore Throat	2
Small-Pox	1
Cough	9
Dyſpnœa	4
Cough with Dyſpnœa	9
Hæmoptoe	4
Phthiſis Pulmonalis	4
Gaſtrodynia	6
Diarrhœa	20
Colica	3
Colica Pictonum	2
Hæmorrhois	5
Aſcites	4
Anaſarca	6
Hydrothorax	2
Cephalalgia	6
Vertigo	4
Epilepſia	3
Paralyſis	2
Hyſteria	6
Dyſuria	3
Chronic Rheumatiſm	16
PUERPERAL DISEASES.	
Peritonitis	2
Menorrhagia lochialis	5
INFANTILE DISEASES.	
Ophthalmia purulenta	2
Aphthæ	5
Rachitis	1
Scrophula	4
Hooping Cough	3

Having arrived at that ſeaſon of the year in which thoſe diſeaſes, which form a large proportion of the liſt in the winter months, uſually decreaſe in number, or abate in the violence of their ſymptoms, we might expect that this claſs of maladies ſhould hardly make their appearance on the liſt.

The great viciſſitude, however, in the temperature of the atmoſphere, has protracted ſome of theſe complaints to an unuſual period. Diſorders of the bowels alſo, which were taken notice of in the laſt report, form an important part of the preſent liſt.

Caſes of diarrhœa have been uncommonly numerous; have been protracted to a conſiderable length, and have been liable to return upon the leaſt irregularity of regimen or diet.

Diſeaſes

Diſeaſes admitted under the Care of the Phyſicians of the Weſtminſter Hoſpital, from the 20th of May to the 21ſt of June, 1800.

Continued Fever	16	Hæmoptyſis	2
Pleuriſy	1	Hæmorrhois	1
Sore Throat	1	Hyſteria	3
Amenorrhœa	2	Impetigo	1
Anaſarca	6	Jaundice	1
Angina Pectoris	1	Leucorrhœa	3
Aſcites	2	Lithiaſis	1
Aſthenia	2	Rheumatiſm	5
Catarrh	1	Palpitatio	1
Cephalæa	1	Syncope	1
Cholera	2	Sciatica	1
Cough	4	Struma	3
Diarrhœa	5	Syphilis	1
Dyſpepſia	1	Tinea	2
Dyſuria	2	Vertigo	1
Enterodynia	2	Worms	1

MONTHLY REPORT of DISEASES,

Admitted under the Care of the PHYSICIANS of the FINSBURY DISPENSARY, St. John's Square, Clerkenwell.

The Diſtrict, in which the Patients of the Finſbury Diſpenſary are viſited, comprehends the Pariſhes of St. James, and of St. John, Clerkenwell; of St. Luke; of St. Sepulchre within and without; of St. Bartholomew, the Great and the Leſs; the Liberties of the Rolls, and of Glaſs-Houſe Yard; the Town of Iſlington; the Pariſhes of St. Pancras; of St. Andrew, Holborn; and of St. George the Martyr, Queen's-ſquare. This Tract of Ground may properly enough be termed, a North Weſtern Diſtrict of the Metropolis.

LIST of DISEASES, &c. from May 20, to June 20.

	No. of Caſes.		No. of Caſes.
Hæmorrhois	4	Sore Throat	1
Worms	7	Continued Fever	10
Prurigo	11	Pneumonia	2
Schrophula	3	Dyſentery	3
Jaundice	2	Amenorrhœa	13
Paralyſis	3	Leucorrhœa	9
Cough and Dyſpnœa	14	Aſthenia	10
Dyſpepſis	27	Phthiſis	12
Chronic Rheumatiſm	12	Hyſteria	6
Acute Rheumatiſm	2	Dropſy	7
Lumbago	4	Cephalæa	5
Menorrhagia	10	Infantile Diſeaſes	18
Diarrhœa	6	Mania	3
Hæmoptyſis	6		

It

It appears from the above Report, that the diſeaſes which have principally prevailed during the laſt month are *dyſpeptic*, or thoſe that originate from ſome fault in the organs of digeſtion. This is, in a certain degree, to be accounted for by the alteration that has taken place in the temperature of the air, which, whilſt it has proved more favourable to the relief of catarrhal and rheumatic affections, may, by its increaſed warmth, have a tendency to relax the tone of the ſtomach, and thus predíſpoſe to thoſe morbid ſymptoms which are more peculiarly connected with that viſcus.

The diſorders of the ſtomach which have occurred, might, in a large proportion of caſes, be clearly traced in men, to the abuſe of ſpirituous liquors; and in women, in addition to the abuſe of ſpirituous liquors, to which, after they have once paſſed over the bounds of ſobriety, they are, more than the other ſex, completely and irretrievably devoted, an intemperance in the uſe of tea. Although this, in a *moral* view, is ſurely far leſs dangerous than inebriating ſtimuli, is not, perhaps, much leſs ſo in its phyſical effects upon the conſtitution. Beſides, that from the degree of debility and depreſſion which it induces, a perſon is naturally led to have recourſe to what are called *tonic* medicines, or to exhilirating cordials.

A remarkable caſe has occurred of an idiotic girl, about fifteen years of age, who is uniformly thrown into a ſtate of the moſt violent madneſs by the hearing of any kind of inſtrumental muſic, ſuch as the ringing of bells, the notes of an organ, &c. After the hearing theſe or any other ſimilar inſtrument, ſhe, for hours, endeavours to imitate the ſound with her voice. What makes this caſe ſtill more ſingular, is, that according to her mother's account, ſhe is not in any degree affected in the ſame way by *ſinging*.

There was another caſe of mania, which the ſiſter of the patient attributed to the influence of religious enthuſiaſm. But whether, in this particular inſtance, the religion gave riſe to the inſanity, or the inſanity to the religion, it was not in the power of the medical attendant to aſcertain.

One of the inſtances of cephalæa, in the above liſt, was remarkable from its alternating with an ulceration of the breaſt. Whilſt the latter, either by time, or the application of ſurgical ſkill, gradually got better, the former as gradually came on. This alternation had taken place in repeated inſtances. The pain in the head was at its greateſt violence at the period of the patient's firſt attendance at the Diſpenſary, when the ſore was completely healed. As a ſubſtitute for the diſcharge thus ſtopped, an iſſue was ordered in the arm, in conſequence of which, and partly perhaps in conſequence of the Peruvian bark, which

which was also prescribed, and the enjoyment of country air, the patient for some time past has not, in any considerable degree, suffered from either of the complaints with which she had been before afflicted.

In the cases of amenorrhœa that have occurred during the period that the drawer up of this report has attended the dispensary, the preparations of steel have exhibited a decided superiority over those of the Peruvian bark, or indeed, any other remedy taken into the stomach.

Electricity in one instance proved almost immediately successful. It is to cases like these, where a *sudden agitation* of the system is required, that this stimulus seems peculiarly adapted. In a case of paralysis in which it was administered, it produced some appearance of temporary relief, but the patient died on the succeeding day. Perhaps it may be laid down as a general rule, that *chronic* diseases are not to be cured by *violent stimuli*, but rather by the application of those gentle remedies that gradually restore the strength of the constitution.

A case equally remarkable and melancholy, has remained for a very long period under the care of the dispensary. It is that of a young woman who, for many years past, has been confined to her bed in a state of universal spasm. She lies rigid and motionless, with her eyes more than half closed, and every other organ of sense almost completely shut against external impression. The physician who attended her, by speaking in her ear as loud as it was possible for him to do, succeeded only so far as to produce a motion of the lips that betrayed an ineffectual endeavour for utterance. It seems to be a case in which there is an habitual absence of actual sensation, although, by some violently exciting cause, the sensibility may, at times, be imperfectly awakened. Lying in such a state, with scarcely any symptom of vitality but a feeble respiration, she can be regarded as little else than a *breathing corpse*. Upon this curious case being stated to a person of distinguished learning and acuteness, he suggested it as a possibility, that consciousness might still *exist*, although it was unable to *appear*, in consequence of the voluntary muscles usually employed in expressing it, refusing in this instance to discharge their accustomed office. This, it is to be hoped, is not actually the case. Nothing is more terrific to the imagination than the idea of being buried alive; and what mode of being buried alive can be conceived more truly horrible than for the *soul to be entombed in the body!*

J. R.
W. W.

Hatton Garden.

To

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IT muſt give great pleaſure to every lover of, and well-wiſher to, the ſcience of medicine, to ſee that ſeveral of your Correſpondents have called the attention of the profeſſion to the ſubject of Quackery; which is likely to become more extenſively pernicious, from the public teſtimony which a few perſons in exalted ſtations have thought it incumbent upon them to bear to the efficacy of certain advertiſed infallible remedies. The danger obviouſly reſulting from Empiriciſm will be readily admitted by all who have been regularly educated, and are converſant with the powers of ſimple and compound medicines, and the œconomy of the human ſyſtem; but it is not ſo eaſy to diſcover a method of checking the public progreſs of this evil. The plan which your correſpondent, Aliquis, propoſes of referring the ſubject to Parliament, would certainly be effectual, could an act be paſſed, forbidding the *advertizing* any kind of noſtrum in any news-paper, hand-bill, or in any other way whatever; for it is by theſe means that the public attention is conſtantly directed to the proprietors, whoſe names would ſoon fall into contempt, if their ſkill and reputation were analyzed by the moſt proper teſt — the number of *real* cures which they wrought. So well aware of this fact are theſe infallible doctors themſelves, that they find it neceſſary to vary the form of their advertiſements, to obtain even *them* a reading.

Mr. Bartley has, with probable ſucceſs, (in No. XV.) brought into view ſome facts, to prove the danger, expence, and folly which thoſe run into, who are the dupes of Quackery. It appears to me, that the frequent expoſure of ſuch facts would have the beſt effect: but in order that they might, it is neceſſary they ſhould be circulated through the ſame channel as the doctors' advertiſements; for the readers of your excellent Journal are not the perſons likely to be hurt by the ignorant and preſumptuous empyric. It is, generally ſpeaking, the middling and lower ranks of people who are the ſubjects and dupes of this impoſture: And that the public may have the better opinion of the medicines, the proprietors commonly inform them, that, "*by the bleſſing of God*," they undertake, with their powders, potions, or balſams, to cure all diſorders. Thus ignorance and blaſphemy unite in picking the pockets and ruining the conſtitutions of thouſands. It might be well if the following general obſervation, amongſt others that might be mentioned, could any way be impreſſed upon the public mind: —

The pretenſion to infallibility in any one medicine, in curing any one diſorder, is abſurd; much more ridiculous is it to ſuppoſe, that any medicine will remove *all kinds* of complaints: for every medicine poſſeſſes active properties, or it does not. If it be active, it muſt be dangerous to apply it, indiſcriminately, to perſons of every age, and without regard to their habits of living. Such an active medicine may be very efficacious in ſtrengthening a debilitated conſtitution, but would be highly injurious if exhibited for acute rheumatiſm, or any other inflammatory diſorder, and, *vice versa*; conſequently, it is unwiſe and unſafe to apply the ſame remedy in all caſes. Should the medicine be inactive (which is doubtleſs often the caſe, or more miſchief muſt follow) it can be of no other utility than to work upon the imagination; thereby amuſing the patient, while his pockets are rifled, unperceived.

It is to be lamented, that while many are robbed of their money and health by mercenary and rapacious impoſtors, not a few are led into error and danger by the noſtrums of thoſe who are actuated by the pureſt motives in recommending them to the public, through the channel of various periodical publications. I allude now particularly to the circumſtances of balm, barm, or yeaſt, having been, in the moſt unqualified manner, held out as a certain cure in *putrid fevers*. That which is ſimple in its nature, and eaſy to be come at, is ſure to go down with the multitude. It is not denied, that the fixed air in the balm may occaſionally have ſome good effect in putrid diſeaſes; but I condemn the conduct of thoſe who, in contending with ſo dangerous and powerful an enemy as typhus fever, place yeaſt in the front and heat of the battle, whilſt bark, wine, and opium are put in the rear, or, perhaps, ſtationed at a diſtance as a "corps de reſerve."

In the Armenian Magazine for Auguſt laſt, a very brilliant diſplay is exhibited of the wonderful effects of this wonderful medicine. Amongſt other caſes, "too tedious to mention," a man is ſtated to have been "in the laſt ſtage of putrid fever," when the yeaſt was given, "diluted with water," and the "next morning he was apparently well, *and walking in his garden*." So in the Monthly Magazine for laſt November, it is aſſerted, that "a ſtrong Dutch girl, brought low with a putrid fever, was ordered ſome yeaſt, and was *immediately* cured." I have frequent opportunities of ſeeing and treating putrid fevers, but have never witneſſed theſe ſudden recoveries from the laſt ſtage of them to "walking about in gardens." But as people in general are ignorant of the diſorder, no wonder if, being ill judges of the moſt ſuitable remedies, they throw

throw out to a sinking friend even a rope of sand, that is handed to them by a kind but mistaken neighbour.

I lately attended the servant of a gentleman, in the last stage of typhus; pulse 140; subsultus tendinum, &c. I informed him, I thought the case a dangerous one. He said, he wished me to try yeast, as he had seen it strongly recommended in the Monthly Magazine. I told him that, to give it a fair trial, I should lay aside every thing else. I did so; and the second spoonful of yeast brought on such a purging as had well nigh carried her off; but by returning to opium, wine, and bark, she happily recovered. About a week after, another young woman, who had been ill nine days, and was covered with petechiæ, and even vibices, was directed by her master to take the yeast; and if she was no better in the morning, to send for me. In about four hours after she took the yeast, a violent purging came on, which I could not check, and she died the next day. There were five others in the family, who were all successively attacked, and to whom I exhibited opium and volatile alkali pretty plentifully; they all recovered excepting an infant two months old, to whom it was impossible to give any thing. Thus we see, that however well "a strong Dutch girl" may bear *working* with yeast, it will not be safe to have recourse to such means in recovering our fair country-women from putrid fevers. The publisher of this nostrum, in the Armenian Magazine, tells us, he was first led to this idea from the fact that a piece of putrid meat is sweetened by being suspended over working beer. But to conclude from hence, that yeast (that is, the fixed air in it) will correct the putridity of the blood, and other animal circulating fluids, is fallacious; for it is not generally admitted that such putridity actually exists in the blood: But suppose it does; if we allow ourselves to judge of the effects of any substance on the living fibre and system, from its known action on *dead* matter, we shall be led into the most dangerous mistakes. The concentrated vitriolic acid preserves dead animal matter from putrefaction; but we know that it cannot be swallowed with safety, except in small quantities and diluted with water. So, on the other hand, humidity is known to promote the putrefaction of dead animals, while water may be swallowed, and externally applied, not only with safety, but even with advantage, in putrid fevers. Upon the whole then, it is plain, that unless the public in general were well acquainted with the various diseases incident to mankind, it must be dangerous to commit the treatment of them to such unskilful hands. We do not act so in the other professions. Does not the client employ counsel learned in the law to plead his cause? Will a wise government entrust the com-

mand of its armies and navies to men unacquainted with military and naval tactics?

Permit me to embrace this opportunity of tranſmitting to you two caſes of *Croup* ſucceſsfully treated with the Digitalis, which, I think, promiſes to be a very efficacious remedy in that dreadful and generally fatal diſorder. I ſhould have waited to ſee its effects in a greater number of caſes, before I had ſent you the reſult, but am deſirous of throwing out the hint to practitioners in general as early as poſſible, and ſhall be happy to ſee it has been improved upon with the deſired ſucceſs in their future treatment of the croup.

Mary Bell, four years of age, was brought to me about twenty-four hours after being attacked with the uſual ſymptoms of croup. The hoarſeneſs, ſhrill voice, and dyſpnœa were very conſiderable. I ordered five drops of tinct. digitalis to be given her in water every four hours; and the next day ſhe was quite free from the complaint, which never returned.

Mary Millard, a year and half old, was attacked on the 11th of this month with hoarſeneſs, a barking cough, and great dyſpnœa. I ſaw her about twenty hours after the firſt appearance of theſe ſymptoms, and found her extremely reſtleſs, with a very quick pulſe. I ordered five drops of the tinct. digitalis every four hours. 12th, Symptoms relieved; p. ſtill quick; has had one ſtool. Increaſed the doſe to ſix drops:—at night p. leſs frequent; three ſtools; hoarſeneſs and barking almoſt gone. 13th, Still ſome barking, but coughs leſs frequently:—8 o'clock at night, very reſtleſs; hoarſeneſs and dyſpnœa increaſed; p. very quick. Cont. tinctura. 14th, Slept well; frequent ſtools; dyſpnœa and hoarſeneſs much relieved. Adde tinct. opii gt. ij. ſing. dos. digitalis. 8 o'clock at night, five ſtools ſince morning; p. much leſs frequent; dyſpnœa and hoarſeneſs ſtill better. 15th, A good night; two ſtools; pulſe calm; dyſpnœa quite gone; ſome hoarſeneſs remains. 16th, Symptoms of the croup quite gone. 21ſt, Continues free from complaint. I am,

GENTLEMEN,

Your moſt obedient ſervant,

GEO. CUSTANCE.

Kidderminſter,
May 22, 1800.

To

To Dr. BRADLEY.

SIR,

IF I had waited for the preſent increaſing numbers of impartial teſtimonies and indubitable facts in favour of Vaccine Inoculation, I need not have troubled you to inſert this letter in your uſeful Publication; but as, in the onſet, I did (with more zeal than prudence) oppoſe, what I then conſidered an innovation in practice, (by confounding the uncertain effects of the caſual, and, perhaps, ſpurious cow-pox, with the real advantages evidently ariſing from this diſeaſe when inoculated) I now think it right, in juſtice to Dr. Jenner and the medical public, to declare,

That, in the courſe of my practice, I had occaſion to make trial, and do approve of vaccine inoculation; yet, I think it ſhould only be conducted by practitioners who have taken proper care to aſcertain the genuine diſeaſe.

I remain, with great reſpect,

SIR,

Your obliged and conſtant reader,

Gloceſter, May 29, 1800. CHARLES COOKE.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

FROM my not having been in the habit of reading your Phyſical Journals, I remained till this day, (when a friend put the whole of them into my hands) nearly ignorant of the variety of debates which have taken place upon the important ſubject of Vaccine Inoculation. Dr. Jenner's two firſt publications, a paper of Dr. Pearſon's, and an early one of Dr. Woodville's, comprehended the whole of my reading on the diſeaſe; but, I have been by no means an idle practitioner in the buſineſs, and I have not failed to endeavour to ſatisfy myſelf completely in every doubtful point regarding it: and I find, in that reſpect, I have ſucceeded quite as well as my brother inoculators. If you can afford me a page or two in your next Pamphlet, I will mention a few particulars which, I hope, may not be unſatisfactory. Early in laſt Spring, Dr. Pearſon (of whoſe acuteneſs and indefatigable perſeverance too much cannot be ſaid) ſent me ſome vaccine virus, with which I inoculated ſeveral perſons; in two inſtances only it took effect;

on

on a man and a little girl: The former about the ninth day became ill, and so continued for several days, when a few *pink, fiery-looking blisters* appeared on his body, and then followed a very numerous eruption, exactly like small-pox of the distinct kind; they took the usual course of variolous pustules, and the man did well. From one of those *pink vesications*, I inoculated his wife, and she had the *true cow-pox*, with only *local pustules:* the man's son, who never had the small-pox, remained with his father the whole time, but did not catch the disorder. From the woman I inoculated three children, and they all had eruptions of the *variolous kind*, and were very ill during the eruptive fever. From those I inoculated a few others, some of whom had eruptions, and some had not. At this time, I was also using matter which originated with the little girl, who took it when the man did, and which I soon learnt to prefer, she having the disease in the mildest form possible; and from this, in no one instance did eruptions occur, in upwards of a hundred patients, from two weeks old to eighty years, whom I inoculated last Spring. During the Summer I wholly discontinued it; in the Autumn, through the kindness of Dr. Pearson, I again obtained some virus, and have inoculated as many more, without having one eruptive case. The facts I can state to be clearly demonstrated by my extensive inoculation, are these: That the disease, when unattended with eruptions similar to variolous, (which, by the bye, notwithstanding such high authority as Dr. Pearson's, I believe to make no part of it) is a *thousand times more trifling than small-pox*, scarcely having had a patient sufficiently ill to prevent amusement or labour:—That the *local inflammation* of the arm is not to be dreaded; I never had occasion for any other application than a bit of rag, when the pustule has been rubbed off; that rag has been singed:—That it is not an *infectious disease*; to determine which, I selected about forty people in our workhouse, and inoculated half of them, some in both arms, and fixed them to sleep with those who had not had it; but in no instance was it communicated to the others. I broke the pustules, and frequently made them smell the parts, but to no effect. After giving the disease to the remainder, I, beyond cavil, ascertained it to be a *perfect security against the small-pox*, for I immediately inoculated the whole party with the most virulent variolous matter I could procure; but nothing ensued, except local superficial inflammation for the first six or seven days. I then introduced a wretched family, just recovered from very bad small-pox, their dirty clothes unchanged, and divided them in different beds among them, but to no purpose. I then inoculated with cow-pox an infant, and as soon

as

as I was ſatisfied it had taken, I put it, and kept it in the bed with its ſiſter, who had the moſt dreadful confluent ſmall-pox, but no inconvenience enſued. Moſt of theſe workhouſe children I have this ſpring inoculated again, both with variolous and vaccine matter, but nothing happens: this ſhews the vaccine effect to be a *laſting* ſecurity againſt *itſelf*, as well as the *ſmall-pox*. I have inoculated ſeveral people with it, who have had the ſmall-pox, but it has only proved, they are *not ſuſceptible* of the diſeaſe. If a perſon be inoculated with vaccine lymph, and the operation be repeated a few days after, if the firſt have taken, as that advances, the ſecond, though taken alſo, diſappears. Beſides the caſes above noticed, moſt of the others whom I have inoculated, have had variolous matter inſerted afterwards, for the ſatisfaction of themſelves or friends.

I muſt now ſay ſomething reſpecting the caſes where *puſtules* appear. I believe they are to be accounted for this way:—Originally, ſome how or other, the vaccine virus gets intermixed with variolous; in this ſtate it is inſerted into the arm together; they are both acting on the ſurrounding parts, *locally and diſtinctly:* if, perchance, the vaccine fermentation goes on the faſteſt, *that* gives the ſtimulus to the conſtitution, and the cow-pox is produced; if the variolous do, the ſmall-pox is the conſequence. Should they happen to keep tolerable pace with each other, I think both get into the habit, as in the caſe of my firſt patient. Now, in drawing a thread through this mixed local puſtule, if you ſuppoſe it to be merely mixed, and not, if I may uſe the expreſſion, chemically combined, (which by no analogy we can allow) one part of that thread may have particles of variolous, the other of vaccine virus adhering to it; and, thus account for my firſt little girl's caſe, and thoſe who followed, &c. All the local puſtules I ever ſaw in theſe eruptive caſes, contained a fluid of a different *conſiſtence and appearance* from the true vaccine lymph, approaching very nearly to pus. If the thing could have been procured from *greaſy-heeled horſes*, I ſhould have had the means of propagating the diſeaſe ſome months ſooner than I had, as I left no experiment untried upon my poor cows to produce it. As to its calling out *ſcrofulous complaints*, I never knew an inſtance of it; and unleſs it be in caſe of puſtules, I ſhould think it cannot be expected. I never knew any cutaneous diſeaſe follow it; and during my practiſing this new mode, I have never thought it neceſſary to give a doſe of phyſic either after or before inoculation. I muſt not conclude without noticing a circumſtance which has frequently happened to me when I have been neceſſitated to uſe *ſtale matter*, and which, at the time

time of my being leſs experienced, would moſt probably have led me into fatal errors. Upon introducing a bit of thread, which has been impregnated with vaccine lymph *only a few days*, inflammation has quickly followed, and, to a haſty obſerver, not very unlike the true inflammation; this runs on five, ſix, and ſeven days, then it ſuperficially ſuppurates, and for the moſt part ſcurfs over; but occaſionally it has continued a ſore ſome time longer, producing a degree of illneſs, &c. but never the genuine cow-pox. This ſhews, that the ſpecific powers of the vaccine fluid are ſoon loſt by putrefaction, and that the part is affected in the ſame manner it would be by any other putrid animal ſubſtance placed under the cuticle; and all thoſe inſtances enumerated by practitioners, as having been ſuſceptible of ſmall-pox after inoculation with the vaccine, are to be traced to this ſource of deception. I am,

GENTLEMEN,

Your obedient humble ſervant,

Seven Oaks, May 19, 1800. T. M. KELSON.

The Mitchillean Theory defended.

[Extracted from a Letter of Profeſſor MITCHILL, of New York, to Mr. PERKINS, of Leiceſter Square, Proprietor of the Metallic Tractors. Dated Columbia College, April 3, 1800.]

I Think the *nitric* acid is ſufficiently proved to be a mixture of *three* acids, in the pureſt form in which it is obtained by chemiſts.

Firſt, There is a quantity of ſea-ſalt mingled with the pureſt ſalt petre, of which it is rarely or never diveſted. This affords muriatic acid, which comes over firſt in the diſtillation, and mingles with the product in the receiver. The exiſtence of this acid is proved by adding nitrate of ſilver, which is immediately rendered turbid, and precipitated in a white mucilaginous ſediment.

Secondly, A portion of the ſulphuric acid employed to decompoſe the nitre, is volatalized by the heat, and riſes in vapour too; and thus a portion of ſulphureous acid is blended with the diſtilled ſpirit in the receiver. This is proved by adding nitrat or acetat of lead, which falls down in the form of the ſulphat of lead. Theſe precipitates are formed in all the forms and ſamples of nitrous acid that I ever ſaw.

Thirdly, It being known that the ſulphuric and ſeptic acids are

are mixible with each other, it must often happen that they combine *before* the mixture meets with potass to neutralize it.

Fourthly, As it is equally well established, that septic and muriatic acids will enter into union, it follows that these two, *very commonly indeed*, are blended together, *before* they are connected with the fixed vegetable alkali. It is therefore ordinarily impossible to procure one drop of pure and naked septic acid, by any decomposition of nitre that can be instituted. The acid obtained is always an *aqua regia*, or some such thing; and the assertion that *aqua fortis* dissolves silver, and *aqua regia* gold, is not correct. Both these acids are modifications of *aqua regia*; or, in other words, mixtures of various things with the original acid of putrefaction.

Fifthly, Such being the constitution of nitrous acid, the *nitric acid* must be equally a mixture or farrago of things; and thus, of course, is nitrous air, nitrous acid vapour, nitrous oxyd, and every thing of the sort, procured by art, or by the processes in the laboratory. I wish the gentlemen who prescribe and publish so much about these substances, would consider a little more attentively the composition of the things they employ; we should then have less contradiction and obscurity on the subject.

Sixthly, You may rely on it, therefore, that the *analysis* of *nitrous acid* into *azote* and *oxygen*, is not correct—*There never has been such a pure specimen of nitrous acid in this world*, obtained by distillation from salt petre. I wish that the true composition of these forms and mixtures of septic acid might be properly enquired into and understood.

Your's, with the highest consideration and regard,

SAMUEL LATHOM MITCHILL.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF the following, in your opinion, can be of the smallest support to the use of cold affusion in fevers, and be deemed worthy a place in your truly valuable Journal, its insertion will oblige,

GENTLEMEN,

His Majesty's Ship, Tourterelle, Spithead, May 12, 1800.

Your very obedient servant,
JAMES SCHAW, Surgeon.

THE affusion of cold water on the surface of the body in typhus and other fevers, so ably treated of, and recommended, by Dr. Currie, appears to me a subject deserving much attention, both as a simply efficacious remedy, and for the ease with which it may always be procured; it therefore becomes a duty incumbent on every practitioner who has experienced its effects, to communicate the result of his practice to the public.

From various opportunities which I have had of observing this method of treatment, and from having frequently put its effects to the test myself, I feel fully warranted in asserting that, in every case where it is judiciously employed, its efficacy will invariably be evinced. In country practice, when the general affusion could not be used on account of the prejudices of the lower order of men, I have seen different instances, where even the partial application of cold water to the face, neck, breast and arms was of infinite service, and, indeed, I hardly ever saw it used without some very palpable advantage arising.

In the Medical Journal for last March, I observe a paper from some person, assuming the appellation of VIATOR, wherein the author seems to question the propriety of the practice, and suggests that it may be productive of obstinate diarrhœa when unsuccessful. Without entering into controversy with your anonymous correspondent, I shall only recommend to him to give it a fair trial, ere he starts any more objections, when, I may safely prognosticate, he will find his theoretical insinuations quickly vanish before the peremptory and uncontroulable evidence of fact and experience. A late traveller, who seems to differ a little in this opinion with our Viator, informs us, the practice was by no means an uncommon one in Abyssinia; and, if I mistake not, he says, the water was copiously thrown over the patient as he lay in bed, in all stages of highly putrid and other fevers, with, I believe, manifest advantage. Its good effects are very well known to many who visit more southern climes. A meritorious practitioner of my acquaintance, who has made repeated voyages to Africa, assured me that he found the most beneficial consequences result from a copious use of it. He used to place the patient under a pump, and allow the water to play over him in a full stream, or dash it over his body in buckets full, with admirable effects.

Mr. Martineau, in a paper inserted in the Medical Journal for January last, seems to approve its application in cases of internal inflammation, and says, that no inconvenience arose from it even where pneumonic complaints were present. With all due deference to Mr. M's opinion, and without any intention to implicate in the least the accuracy of his observations,

I beg

I beg leave to remark, that, in three cases which fell under my own inspection, where catarrhal symptoms attended the fever, the cold ablution appeared to do evident mischief, by increasing the cough, and consequent irritation, to such a pitch as almost totally precluded rest; which, of necessity, compelled the remedy to be abandoned.

The beneficial effects of cold lavation in febrile disorders, may, perhaps, be farther exemplified by an instance that occurred in the Royal Infirmary at Edinburgh. The disease was small-pox; the subject a Negro lad about 17. He was brought into the Infirmary with all the symptoms of a pretty acute fever. No eruption was present, and the affusion of cold water was directed by, I believe, Dr. Home. This, to the best of my recollection, was performed twice, when the eruption appeared, and put a stop to its further use. The pustules were extremely few in number, and the attendant fever so exceedingly mild, that the patient walked about the ward during the whole continuance of the disease.—But to relate a case:

A. M. a sailor, ætat. 30, of a robust healthy constitution, was attacked, on the 22d of October last, with all the usual symptoms of fever, which he attributed to cold. He had an emetic given, which operated very well as such, but produced no other sensible effect. On the 23d, in the morning, his pulse was 116 in the minute, his skin very hot; he had great thirst, and complained of severe head-ach; had a stool during the night. My hand acted the part of a thermometer, and I directed the application of cold water, which was performed while I felt his arm with one hand, and held my watch in the other to mark the change I expected. The affusion was scarce finished when his pulse fell to 90; he was then dried and put to bed. I visited him in half an hour, when his pulse was 92, and regular, skin cool, head-ach much relieved, and he felt wonderfully refreshed. Six o'clock, P. M. pulse 100, heat above natural, head-ach increased since the afternoon. The operation was repeated with the same effect as in the morning, reducing the pulse to 70. In an hour afterwards, when I again visited, he said he felt "very easy," his head-ach was nearly removed, and the heat of his skin was very little, if at all, above natural; I ordered an opiate to be given at bed-time.

24th. Eight o'clock, A. M. pulse 76; slept well during the night, has little head-ach, skin very little above natural heat; had a stool this morning.

Rep. Affusio aquæ frigid.

7 P. M. Pulse 72, skin of natural heat, no head-ach; has been walking about great part of the afternoon, and says he feels "quite strong." No farther application was necessary.

D. L. ætat. 25, of a healthy and ſtrong conſtitution, was attacked, in the night of the 21ſt of February laſt, with cold ſhivering, followed by increaſed heat, head-ach, nauſea, and ſlight vomiting. I ſaw him about nine next morning. The vomiting had ceaſed; the nauſea was likewiſe gone; pulſe 112, and ſtrong; ſkin hot; face flushed; breathing a little hurried, but without pain of breaſt, or cough; head-ach very acute; tongue clean, of a bright red colour; much thirſt. I ordered, and ſaw performed copiouſly, the cold affuſion. The ſhock was conſiderable, but the effect almoſt inſtantaneous. The pulſe immediately fell to 80, and the head-ach was greatly relieved.

At one the pulſe was 90, and the heat above the natural ſtandard; I repeated the remedy; which ſucceeded ſo well, that in the evening the head-ach was removed, the ſkin of natural heat, and he recovered without farther application.

Theſe two caſes, I think, ſhew pretty pointedly the advantage of an early employment of this ſimple and uſeful remedy. I have made uſe of it too in the more advanced ſtages of typhus, and, I think, with very happy effects. It evidently mitigated the violence of the febrile ſymptoms, and appeared to ſuppreſs the tendency to delirium; and although the diſeaſe generally ran out its courſe, yet it ſeemed to aſſume a milder form, and to be attended with leſs danger, when this treatment was adopted.

I might have related other caſes of the ſame nature, but as the events in all were pretty ſimilar (allowing for a ſlight variation in circumſtance), and as I am fearful of exceeding the limits of a ſheet, I defer, till ſome future period, ſaying any farther on the ſubject.

Should this be honoured with your notice, I ſhall be ſtimulated to renew my efforts in the ſame cauſe, or any other which chance or opportunity may place within my reach.

The inaccuracy and want of connexion which may appear above, I doubt not will be liberally excuſed, when it is conſidered how ill calculated a nautical life is for application or ſtudy.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

AS it has been the opinion of moſt medical men that Small-pox and Meaſles could not exiſt, and go through their different ſtages, at one time, in the ſame perſon, I am induced to tranſmit you the following caſe (that came under my care very lately) to be inſerted in the Medical and Phyſical Journal, if you think it ſufficiently intereſting. I am,

GENTLEMEN,

Very reſpectfully,

Eaſt Street, Manchester Square. EDW. LEESE.

APRIL 19th, 1800. The infant of Mr. W. in Paddington Street, about five months old, at the breaſt, without any appearance of teeth, had been ever ſince its birth a very fine and healthy girl, though it had in the ſkin eight or ten little ſpots ſomething like flea-bites, but ſo very trifling as not to produce in me the leaſt heſitation to inoculate it, it being otherwiſe quite lively, and in good health; I therefore inſerted into the arm ſome variolous matter, recently taken from a healthy girl that had the diſeaſe by inoculation.

On the morning after the inoculation, a powder, compoſed of calom. ppt. and p. rhei, was given; and afterwards, for a few days, pulv. antim. and calom. in very ſmall doſes, every night and morning.

On the 4th day it was evident the virus had began to act in the arm, the little ſpots before obſerved had diſappeared, and the child was in its uſual ſtate of health.

About the 9th day ſome little ſpecks appeared in the ſkin, which it was ſuppoſed would become variolous puſtules, but they diſappeared, though about ten or twelve in the arm, around the inoculated part, continued to increaſe, and advance to ſuppuration.

10th day, Much as yeſterday, but the child rather feveriſh and uneaſy.

11th day, Uneaſy as yeſterday, with ſome little fever; a very few ſpots about the *body*, that promiſed to be variolous puſtules.

12th day, Rather more fever, puſtules more advanced, bowels open; ordered a ſaline febrifuge mixture; ſeemed alſo a little heavy, and ſtuffed at the noſe. The weather being to-

lerably

lerably fine, it had been carried out almoſt every day; was therefore ſuppoſed to have caught a ſlight cold.

13th day, The variolous puſtules advancing, the heat of the ſkin rather leſs; but was ſomewhat ſurprized to find it filled in every part with an eruption exactly reſembling meaſles, accompanied alſo with much redneſs of the eye-lids, and diſcharge from the eyes; the breathing a little impeded from the ſtoppage in the noſe. As I ſuppoſed the variolous and morbillous eruptions could not appear together, but that one would be retarded till the other had taken its courſe, I was in ſome doubt whether to pronounce it meaſles or not.

14th day, The variolous puſtules increaſing, and filled with ſome matter; a good deal of inflammation in the arm, and the puſtules there very prominent, though not very large; the morbillous eruption general, and very diſtinctly marked, with watering of the eyes, ſneezing, cough, and ſlight oppreſſion in reſpiration. I took a medical friend with me, who, like myſelf, had never ſeen ſuch a caſe, and he perfectly agreed with me that there was not the leaſt doubt but the eruption was the meaſles.

15th day, Leſs ill than yeſterday, meaſles diſappearing, ſmall-pox advancing, cough and ſneezing leſs frequent than yeſterday.

16th day, Called, but the child was carried out; the mother informed me it was better than yeſterday; the meaſles nearly gone.

17th day, Meaſles nearly or quite gone, the variolous puſtules dying away alſo; they were ſmall, and contained but little matter; the inoculated part drying, and black in the centre.

18th day, The meaſles entirely diſappeared, and the ſmall-pox going very faſt. From this time the child continued to be in perfect health.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

DR. Black, in his inſtructive paper on the Angina Pectoris, Art. XX. Vol. IV. of the Memoirs of the Medical Society of London, obſerves, "Diſſections have ſhewn this diſeaſe to be connected, either with ſome organic degeneracy of the heart or great veſſels, or with ſome mechanic preſſure upon them, ariſing either from an affuſion of fluids, or an accumulation of fat;"

fat;" and concludes with the following query, "Are women exempted from this diſeaſe? I do not recollect any decided inſtance on record of its occurring in the female ſex; and ſome of the oldeſt and moſt experienced phyſicians in this part of the kingdom have made the ſame remark."

The following caſe, recently under the care of Dr. Arden, of this city, and myſelf, will, I hope, be acceptable to the readers of your uſeful Journal.

Your obedient ſervant,

Cheſter, May 12, 1800. G. N. HILL.

Mrs. E. B. from infancy up to the age of twenty-two, of a ſpare habit of body, ſubject to few complaints, excepting a periodical hemicrania of the left ſide, accompanied with copious bilious vomitings; from a change of her ſituation in life, which had hitherto been very abſtemious, to full living on animal food, and the liberal uſe of malt liquors, became ſuddenly very fat; to obviate which, recourſe was had to ſevere labour, acids, and ſtarving, with a total abſtinence from all drinks heretofore uſed. An increaſe of the hemicrania, violent dyſpeptic ſymptoms, irregularity of the menſes, and conſiderable emaciation, were the conſequences: Removal to a more healthy air, change of diet, and moderate labour, removed theſe affections; and, excepting occaſional recurrence of the affection of the face, Mrs. B. enjoyed tolerable health, until the age of thirty-three; at this period, from the concurrent cauſes of eaſe, indolence, full meals of animal food, particularly late ſuppers, the uſe of malt liquors, indulgence in ſleep after dinner, and almoſt total neglect of exerciſe, obeſity returned with quick ſteps, and produced an alarming change. One day, after eating a hearty dinner very eagerly, whilſt attempting to walk to a neighbouring village, ſhe was in a moment ſeized with a violent pain under the left breaſt, extending acroſs the ſternum, towards, but not quite reaching, the right ſide; it compelled her to ſtop inſtantly, when reſting on a ſtone, it went off in a few minutes. Though very much frightened, yet, being a woman of great reſolution, ſhe perſiſted in compleating her walk, notwithſtanding three or four ſimilar attacks before reaching home; but, owing to the precaution of walking very deliberately, and reſting often, none of theſe equalled the firſt in violence or duration. She deſcribed the pain as attended with great and inconceivable diſtreſs at her breaſt, as though her heart gave a violent ſtroke upward towards her throat, and then fell down again, at which inſtant the anxiety was indeſcribable, but commonly relieved for a moment

ment by expulſion of wind from the ſtomach, and a deep lengthened ſigh. The pain for ſome months, or near two years, never recurred but upon uſing ſudden or violent exerciſe; and then, if any friend urged her to come on, and ſtrive againſt it, her apprehenſions were, that death muſt be the conſequence of the attempt. The obeſity continued increaſing, with the addition of a troubleſome incubus; at length, the pain occurred after eating heartily a favourite dinner and lying down on the bed, and often about midnight; hence, it became neceſſary a friend ſhould watch the approach of both theſe unhappy affections, and awake her; when ſhe would inſtantly get up, labouring under the apprehenſion of immediate diſſolution. The rather ſudden death of her huſband one morning very early, on receiving the intelligence, was ſucceeded by the pain, like a ſudden ſtroke or blow received on the left breaſt, and the firſt fainting fit; on recovering from which, ſhe complained of pain down her arm, and numbneſs in the hand, particularly the thumb, the whole limb being cold and covered with a clammy moiſture, as, indeed, was the whole body. I was preſent when this happened; on examining the pulſe, I found it very feeble and irregular, giving one weak ſtroke, and then two ſcarce perceptible; it was ſome time before it became regular, and remained feeble and fluttering all day. I preſcribed the camphor julap, made with peppermint water and a portion of æther, which ſtaid on her ſtomach, notwithſtanding a deadly ſickneſs, though not amounting to vomiting, being preſent. The medicine occaſioned the eſcape of much wind, and thereby afforded relief; a large bliſter to the breaſt, ſaline aperient medicines, thin weak liquids for drink, and an abſtemious diet for a few weeks, rendered her free from the faintings, and perceptibly reduced the corpulency. Neglect of this ſalutary plan, towards the latter end of laſt year, was followed by a ſevere attack in the night, ſoon after eating a hearty improper ſupper near twelve o'clock, after having juſt dropped aſleep; about two o'clock, a ſecond; and during my attendance with Dr. Arden, (now called in) a ſucceſſion of paroxyſms at irregular periods for ſeveral weeks: ſome of theſe were ſlight compared to others. Univerſal coldneſs, clammy ſweats, loſs of all ſenſe, and the power of voluntary motion, accompanied the more ſevere fits; and I often obſerved, that immediately on recovery from one, our patient would ſtretch herſelf upwards, ſtrive to yawn, throw her head back, and ſay, ſhe wiſhed ſhe had a rope fixed to a beam to pull at, believing it would expand her cheſt, and give her heart more room to beat. Saline, ſudorific, and gently aperient medicines were preſcribed, with low diet, though indeed, little now ſufficed, the conſtant

conſtant diſtreſs of mind, labouring under continual apprehenſions of death, ſeemed to ſuſpend appetite: the tendency to become thinner ſoon evinced itſelf. Two large iſſues were now cut, one below each knee, the diſcharge from which being copious, afforded conſiderable relief; occaſional moderate evacuations, with this conſtant drain, have reduced Mrs. B's ſize very conſiderably; her health has proportionally amended, but ſhe is ſtill ſubject to returns of the pain upon any ſudden exertion of body, or particular emotion of mind, although it is now but rarely accompanied by fainting.

Dr. Parry, in his recent treatiſe on this formidable diſeaſe, when enumerating its ſymptoms, ſays, "And is altogether ſo free and diſtinct from any difficulty of breathing." Now, in the caſe I have recited, though not before mentioned, this ſymptom was moſt urgent, but only prevailed when Mrs. B. was uſing exerciſe: in thoſe attacks of the diſeaſe which occurred when at reſt, this ſymptom never appeared; but the deep ſighing peculiar to ſuch patients was now moſt conſpicuous, accompanied with a lifting up of the arms, and an intolerable deſire to expand the breaſt. From all which has now been ſaid, permit me to add, I think there can be no doubt, but ſudden increaſe of fatneſs is capable of proving a very alarming cauſe of angina pectoris; it is probable, that the four caſes mentioned by Dr. Darwin in his Zoonomia, as cured by iſſues, abſtemiouſneſs, and antimonials, were of this deſcription; an encouraging circumſtance to thoſe who ſhall be ſo unfortunate as to be afflicted with this diſeaſe in early life; I argue thus, becauſe the complaint, when occurring in perſons at a more advanced period, ſeems, from the clear deductions of Dr. P. to ariſe from oſſification of the coronary arteries; and, unhappily, theſe curative means cannot merely be but little relied on, but, perhaps, would have a tendency rather to aggravate than relieve, inaſmuch, as from our knowledge of the functions of the abſorbent ſyſtem, evacuating remedies tend powerfully to promote abſorption; hence, may quicken, rather than retard the progreſs towards oſſification. Diſſections ſeem to have proved, that perſons liable, or who have fallen victims to angina pectoris, are peculiarly inclined to fatneſs of the heart; in thoſe, therefore, who acquire ſudden, enormous, and diſtreſſing obeſity, can we wonder the diſeaſe ſhould occur ſo formidably? I have never met with a caſe of angina in advanced life, as deſcribed by authors on the ſubject; but I have ſome reaſons to believe, it has occurred in very corpulent ſubjects, and been over-looked; one perſon in particular, a woman, I remember to have been ſo ſimilarly affected to Mrs. B. as, that the deſcription of the one caſe might ſerve

for that of the other, with this difference only, as to the event, that this patient perſiſted in rejecting the uſe of all means preſcribed for her relief, and continuing to grow fatter daily, was one morning found dead in her bed, after having eaten a hearty ſupper of animal food.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

SHOULD the following obſervations appear worthy your attention, you will much oblige me by inſerting them in your uſeful Journal. I am,

Your's,

Grantham, May 10, 1800. B. LEESON, jun.

It is much to be lamented, that, in the narration of medical facts, an unjuſt preference is given to ſuch as have had a favourable iſſue; while unſucceſsful caſes, however intereſting in their progreſs, or important in their event, ſeldom are brought before the public eye. The ſelf-gratification which occaſions this partiality to ſucceſsful caſes, leads alſo to another error, ſtill more injurious to ſound practice and medical improvement,—to the publication of fortunate caſes, the very exiſtence of which is doubtful. Not that I can ſuppoſe any medical practitioner ſo void of principle, as wilfully to impoſe upon the public, fictitious caſes; but, I doubt not, it will be granted, an attachment to a preconceived opinion will frequently prevent a proper attention to the diſcrimination of diſeaſe. Hence, complaints of the moſt ſerious import are frequently reported to have yielded to remedies of trifling efficacy; which, if again employed, on the authority of ſuch reports, are only productive of diſappointment. I have been led to theſe reflections by ſome accounts I have lately ſeen, of the ſucceſsful treatment of the croup. Judging from theſe deſcriptions, a perſon would naturally conclude the croup to be a diſeaſe of long duration and eaſy management. As by one author we are informed, that mercury employed, ſo as to produce ſalivation, effectually cures: another is confident of the ſucceſs of a lotion made with the ſpiritus ætheris vitriolici compoſitus; while a third relies upon a decoction of ſeneka.

No

No doubt, all theſe remedies might be productive of good effect, if the rapid progreſs of the complaint allowed them to be fairly tried. But I am afraid, ſuch is the celerity of the dangerous ſymptoms, that few practitioners have had the pleaſure to experience a recovery from the true croup. It may be right, I ſhould define what I underſtand by the *true croup*: By this term, then, I would expreſs a diſeaſe, ariſing from an extravaſation of coagulable lymph within the trachea and bronchial tubes, which occaſions that peculiar ſound in inſpiration we ſhould expect, was the breath drawn through a narrow pipe. This is preceded by a ſlight inflammatory ſtage, of which the ſymptoms are ſo little troubleſome, as ſeldom to be obſerved.

In conſidering the cynanche trachealis, it is neceſſary to premiſe, that two diſtinct diſeaſes appear to have been claſſed by writers under the ſame name. The one ariſing from a ſpaſmodic ſtricture of the parts ſurrounding the trachea; the other depending on extravaſation, the conſequence of inflammation. In the firſt, the exhibition of an emetic ſeldom fails to remove the complaint, while the ſecond bids defiance to every effort of art. In the ſpaſmodic croup, the attack is ſudden, generally commencing ſome time after the patient has been in bed; it is accompanied by remarkable anxiety, and oppreſſion about the breaſt; a hoarſe, ſhrill voice; great redneſs of the countenance; (which expreſſes moſt grievous uneaſineſs) quick and difficult reſpiration, and a ſoft pulſe. Upon the operation of an emetic, theſe ſymptoms gradually ſubſide; the patient ſinks into a ſlumber, and awakes with little remains of the complaint. I am acquainted with a family, in which this complaint has attacked more than once, each child of a numerous offspring, and has never failed to diſappear upon the operation of an emetic.

Very different is the progreſs of the inflammatory croup; in this, the firſt appearance of diſeaſe is of ſuch an inſidious nature, as ſeldom to create any alarm, being conſidered by the attendants as a ſlight cough accompanied with hoarſeneſs. By degrees the roughneſs of the voice becomes more remarkable, the breath is drawn with difficulty, as if through a narrow pipe, occaſioning a peculiar ſhrill ſound;* there is a conſtant feveriſh heat upon the ſkin, together with a profuſe perſpiration about the head and face, in ſo much that the ſweat ſtands in drops upon the countenance, which exhibits the greateſt anxiety; the pulſe is quick and ſoft; the lips are pale,

* Febris excitatur ad liberandum corpus a muco, & membrana extra vaſa. *Home de Suffocatione Stridula.*

frequently livid; the changes of countenance are ſudden and frequent; at one time it is red, in an inſtant it is pale as a corpſe. The progreſs of this diſeaſe, from its commencement to its termination, as far as you may depend upon the information of nurſes, never exceeds more than four or five days: from the firſt appearance of danger, the patient ſeldom continues more than thirty-ſix hours, rarely ſo long. I have been obliged to refer to nurſes, as I believe few medical men have witneſſed the firſt attack of croup, it being too inconſiderable to merit their attention.

Having endeavoured to enumerate the pathognomonic ſymptoms of the croup, I ſhall farther intrude by detailing two caſes which have lately occurred to me.

G. M. eleven months old, naturally of a full habit, recently weaned, and now about his teeth; as he has generally had a cough and ſtuffing while cutting his teeth, the nurſe was not alarmed at this circumſtance, which had occurred for a day or two before I ſaw him. I was firſt called about eight o'clock in the evening; the great anxiety, difficulty of breathing, and peculiar ſound in reſpiration, clearly indicated his complaint to be the croup: his gums were lanced, an emetic mixture, compoſed of four grains of emetic tartar, one drachm of oxymel of ſquills, and an ounce and a half of water, was given in doſes of two tea ſpoons full every ten minutes until it operated; a lotion, compoſed of ſp. ætheris vitriolici compoſitus, and the aqua ammoniæ acetata, was applied to the throat. At nine o'clock, the ſymptoms continuing equally urgent, I had the aſſiſtance of an eminent phyſician reſident in this town; by his advice, leeches were applied to the throat, and the patient put into a warm bath; bliſters were likewiſe laid on each ſide the neck: from theſe means ſome relief appeared to be gained. At eleven o'clock, the child being more reſtleſs, was again immerſed in warm water; an oily mixture was given occaſionally. At four o'clock in the morning, the violence of the ſymptoms increaſing, an ounce of ipecacuanha wine was given, in ſmall quantities, before it produced any effect; the warm bath was again uſed; about ſeven o'clock the child expired.

April 20, J. L. aged twenty-two months, yet ſtill at the breaſt, has had a ſlight cough for a few days; it has increaſed much during the night; the child has been very reſtleſs, and ſweats much about the face and head; ſwallows with tolerable eaſe; breathes with much anxiety, and with a peculiar ſhrill ſound. It was nine o'clock in the morning when I firſt ſaw this child; being aware, from the fatal termination of the former caſe, of the neceſſity of powerful means to arreſt the progreſs

progreſs of the diſorder, I immediately opened the jugular veins, and obtained from thence between ſix and ſeven ounces of blood; after which a ſolution of ſix grains of emetic tartar in an ounce and a half of water, with a drachm of oxymel of ſquills, was given in doſes of two tea ſpoons full every ten minutes; the whole mixture was given before any vomiting was produced; the child was then placed in the warm bath for ſeven minutes. For a ſhort time it appeared to be more compoſed, and to breathe with leſs difficulty; but, about twelve o'clock, the former ſymptoms returned. A tea ſpoon full of the decoction radicis ſeneka was then given every half hour, which excited great thirſt, and additional reſtleſſneſs; the patient grew worſe, breathed with more and more difficulty, and expired about three o'clock P. M.

It has generally been obſerved, that the croup is moſt prevalent during a wet ſeaſon, or in damp ſituations; theſe two caſes occurred when the weather was more than uſually dry.

It will be obſerved in the above caſes, that there was conſiderable diminution of the ſenſibility of the ſtomach; as appears from the quantity of emetic medicine neceſſary to produce vomiting. May not this ariſe from an increaſed determination of blood to the trachea, diminiſhing the influx in the veſſels of the ſtomach?

Remarks on the Treatment of incarcerated Herniæ, with Caſes: By M. Ward, *Surgeon to the Mancheſter Infirmary.*

HAVING ſeldom ſeen the taxis ſucceſsful as it is generally conducted, in caſes of incarcerated inguinal and ſcrotal hernia, I was induced, ſeveral years ago, to place the patient in an *inverted poſition* * whilſt I applied the taxis; and am convinced it poſſeſſes ſome important advantages over the poſitions in common uſe.

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* By this phraſe is meant, the patient being held by the legs on the ſhoulders of an aſſiſtant; his body being allowed to hang down: another aſſiſtant is then to ſupport his head and ſhoulders, and to incline them a little forwards, ſo as to relax the abdominal muſcles.

The following are all the cases of this kind which have been under my care since the period alluded to.*

First. May 25, 1795, Wm. Bellows was admitted into the Infirmary with a scrotal hernia, which had been in an incarcerated state twelve hours. He complained of great pain, and had vomited frequently.

He was bled copiously, and had a clyster given, which produced a trifling evacuation only.

While the warm bath was preparing, an assistant was directed to sit upon the bed with his back towards the patient, and to grasp his legs (which were put upon his shoulders) just above the ancles, and to rise up with him upon his back; another assistant was then directed to support his head and shoulders, and to incline them a little forwards, principally with a view to relax the abdominal muscles, but in part to prevent the weight of the body from falling wholly upon the legs. He was held in this posture ten or fifteen minutes while the taxis was applied, and, by repeating the same process three or four times (allowing him to rest at intervals) the hernia was reduced, without having recourse to the warm bath.

Aperients and a truss were directed for him, and he was discharged cured on the 30th.

Second. January 15, 1796, Wm. Howarth was admitted with an inguinal hernia, which had been incarcerated twenty hours. The most urgent symptoms were singultus, vomiting, and pain.

After sixteen ounces of blood had been taken from his arm, he was placed in the inverted position, and the taxis was applied, at intervals, till the warm bath was ready; several efforts were also made while he was in the bath to reduce the hernia, but were ineffectual. He continued in the bath till he began to grow faint; he was then removed to bed, and, in about an hour after, the reduction was compleated, by again having recourse to the inverted position and the taxis.

Third.

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* I was not aware until I had arranged my notes on this subject, that the late Mr. Pott, and Mr. Benj. Bell, had recommended in their Treatises on Hernia, the position which I have called the inverted position. The former, after having given directions for applying the taxis, adds, "The position of the body, and the disposition of the lower limbs, may be made very assistant in this operation, when the difficulty is considerable; the nearer the position approaches to what is commonly called standing on the head, the better, as it causes the whole packet of intestines to hang, as it were, by the strangulated portion, and may thereby disengage it, &c. &c." Pott's Works, (Earle's edition) Vol. II. p. 67, 68.—See also Bell's Surgery, Vol. I. p. 284, 3d edition.

Third. March 4, 1796, Job Morton ruptured himself by endeavouring to stop a restive horse. Several hours had elapsed when he sent for me.

The hernia was an inguinal one, in a tense and painful state. He had vomited several times. The means made use of were venæsection, the inverted position, and the taxis, which were happily successful.

Fourth. Jan. 20, 1798, Richard Parry, ætat. 40, was admitted with an incarcerated inguinal hernia.

The symptoms, mode of treatment, and the result, were exactly similar to the first case. He was discharged cured in a few days.

Fifth. Wm. Bellows was admitted the second time, (see Case 1.) About sixteen hours had elapsed since he found himself unable to return the hernia.

He was bled, and the warm bath was ordered; but before it was ready, the complaint was removed, by placing him in the inverted position, and applying the taxis.

Sixth. Owing to the following case having occurred in the night, it devolved to the care of Mr. Jenkinson, House Surgeon to the Infirmary, who has favoured me with the following particulars:

"March 17, 1799, Wm. Bellows was brought to the Infirmary at three o'clock, A. M. About six hours had elapsed since he found himself unable to reduce his hernia.

"He complained of great pain, and hiccuped at times.

"I attempted, but in vain, to reduce it by applying the taxis, having previously raised his hips by placing pillows under them. About a pint of blood was then taken from his arm; a purging clyster was injected, which brought away a stool in about half an hour; a cold solution of sal ammoniac was applied to the part affected, and castor oil was ordered internally, which procured him several evacuations.

"Between seven and eight o'clock he was put into the warm bath, and felt easier afterwards, though the tumour continued of the same size, but felt rather softer. About two hours after he left the bath, he was held by the legs on the shoulders of an assistant, and the taxis was applied nearly a quarter of an hour, but the hernia was not reduced; he was then laid down in bed, and a sickness came on, and during the continuance of the sickness it went up."

He was discharged cured on the 22d, with a new truss, his old one having been useless for some time.

Seventh. May 13, 1799, James Taylor had experienced the most excruciating pain four hours, from an incarcerated inguinal hernia.

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The inverted position was not resorted to for want of proper assistants; but the patient's head being lowered, and his hips elevated as much as possible, brought him nearly into that position; and the hernia was speedily reduced by applying the taxis.

If we admit the propriety of placing the patient, when the taxis is to be applied, in such a position as may most effectually co-operate with the surgeon, the inverted position seems in every point of view fairly entitled to a preference, not only in the inguinal and scrotal, but also in the congenital and femoral hernia; and whoever will reflect on the connexion which subsists between the parts above and below the stricture, will be inclined, I think, to draw a similar conclusion.

But this is a matter which does not rest on theory entirely; the experience I have already had of its utility, enables me to say, that more benefit actually takes place from the taxis when the patient is placed in an inverted position, and with less violence or injury to the displaced viscera, than when any other position is made use of; an equal degree of pressure being applied in both cases.

The alarming situation of Wm. Howarth (Case 2) induced me both to repeat the taxis oftener, and also to apply a greater degree of pressure before the resistance could be overcome, than I had ever done before; and it is to these causes, and having availed myself of the most favourable position, that my success is to be attributed, not only in this but in the three succeeding cases.

I should be sorry to be wanting in that respect which is due to the opinions of men deservedly eminent in their profession; but I must beg leave to withhold my assent from the injunction which would limit the surgeon to gentle pressure in every instance. "A little time and pains spent in this manner will frequently be attended with success, and obtain a return of the part; but if it should not, and the handling of it, (which I must repeat should always be gentle) becomes painful and very fatiguing to the patient, we are advised to desist for a few hours, and try the effect of other means."*

"But this must always be had in view, that any pressure that is applied must be of the most gentle kind; for every thing of this nature that creates much pain, is very prejudicial, and ought by all means to be avoided."†

Whoever regulates his practice by the above rules, will, I believe,

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* Pott's Works, Vol. II. p. 68.
† Bell's Surgery, Vol. I. p. 287.

believe, rarely ſucceed in reducing thoſe hernia that are accompanied by a conſiderable degree of ſtricture.

I truſt, however, it will not be imagined I am an advocate for a rude or violent method of applying the taxis; every addition to the preſſure applied, ſhould certainly be made in a cautious and gradual manner; but at the ſame time it will be incumbent upon us to remember, that ſhould we fail in reducing the hernia, the patient muſt either ſubmit to an operation, which often terminates fatally even when performed under the moſt favourable circumſtances, or to the almoſt inevitable alternative of a gangrene taking place, with all its attendant evils.

In the treatment of a complaint ſo dangerous in its nature, and ſo rapid in its progreſs, that the fate of the unfortunate ſufferer is frequently decided in a few hours, it appears highly injudicious to allow a conſiderable portion of that precious time (which ought to be appropriated to the uſe of the moſt efficacious remedies) to be occupied in applying cold liquids, or ice, to the part affected.*

Where cold topical applications are ſo managed as not to divert the attention of the ſurgeon from meaſures of more eſſential importance, my objections will not apply; but having reaſon to believe that great confidence is ſometimes repoſed in them, and being convinced of their general inutility, I cannot help thinking it would be a happy circumſtance were they totally diſcarded in the treatment of every ſpecies of incarcerated hernia.

In the intervals, when patients of the above deſcription are not undergoing the taxis, or uſing the warm bath, might it not promote the object in view (or at leaſt retard the progreſs of inflammation) were they to be laid in bed with the head

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* Mr. Pott's remarks in his Treatiſe on Hernia, when cautioning his readers againſt employing fomentations, cataplaſms, and embrocations, are very forcible, and appear to me not very inapplicable in the preſent inſtance. "I know that in this I differ from the majority both of writers and practitioners; but having (as I think) truth on my ſide, I do again venture to ſay, that I verily believe, that the confidence which has been placed in ſuch kind of applications, has deſtroyed many more lives than it has ſaved. A hernia, with painful ſtricture, and ſtoppage of ſtools, is one of thoſe caſes in which we can ſeldom ſtand ſtill even for a ſhort ſpace of time; if we do not get forward, we generally go backward; and whatever does no good, if it be at all depended upon, certainly does harm, by occaſioning an irretrievable loſs of time: of this kind I take the cataplaſm and embrocation to be; while the former is applied, or the latter uſed, no other more powerful means are made uſe of; and though it has the appearance of doing ſomething, yet I fear it is little more than ſpecious trifling; eſpecially if the caſe be at all preſſing."

Works, Vol. II. *p.* 69, 70.

and ſhoulders lowered, and the hips elevated conſiderably, inſtead of being allowed to lay in the uſual horizontal poſition?

However trivial ſuch a circumſtance may appear, nothing ought to be conſidered beneath notice, which may in any degree tend to promote eaſe, or diminiſh danger.

Mancheſter, May 29, 1800.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IF you think the following Eſſay has ſufficient merit to be admitted into your uſeful Publication, I will thank you to inſert it.

Your's, &c.

May 22, 1800. W. WOODWARD.

By the moſt accurate calculation,* half of mankind die under eight years of age. The extraordinary havock made by diſeaſes among children, is much owing to the unnatural treatment they meet with, which is ill ſuited to the ſingular delicacy of their tender frames. This mortality is greateſt among the moſt luxurious part of mankind, but gradually decreaſes in proportion as the diet becomes ſimpler, the exerciſe more frequent, and the general method of living more hardy; and as it doth not take place among wild animals, the general foundation of the cauſe is ſufficiently pointed out. The inſtincts of children, and the conduct of Nature in rearing other animals, are never attended to, and they are incapable of helping themſelves, particularly in the moſt early period. When they are farther advanced in life, the voice of Nature becomes too loud to be ſtifled; and then, in ſpite of the influence of corrupted and adventitious taſte, will be obeyed.

Many reaſons have been aſſigned why the ſtate of infancy is the moſt ſickly; and why ſo great a proportion of the human ſpecies is cut off at that early period. Phyſicians have inſiſted largely on the unavoidable dangers ariſing from the ſudden

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* Since the practice of inoculation has become ſo general, this may have ſomewhat decreaſed; and the introduction of the vaccine diſeaſe bids fair even to leſſen that: To the honour of thoſe gentlemen, who, in the cauſe of humanity, brought this diſeaſe forward, be it ever remembered.

ſudden and total change of the animal œconomy of infants, that commences immediately on their birth; and on the dangers that are cauſed by the free admiſſion of the external air to their bodies at that time: they have expatiated on the high degree of irritability of their nervous ſyſtem, the delicacy of their whole frame, and the acceſſency of their food. A little reflection, however, may ſhew us, that this account of the matter, though plauſible at firſt view, is not ſatisfactory: This ſingle conſideration refutes it, that all theſe alleged cauſes of the ſickneſs of infants are not peculiar to the human ſpecies, but are found among many other animals, without being attended by ſuch effects; that the diſeaſes moſt common to children are not found among the ſavage part of mankind; and that they prevail in exact proportion to the effeminacy and luxury, and as people forſake the plain dictates of Nature, to follow what they are pleaſed to term, *the light of reaſon.* There is, in truth, a greater luxuriancy of life and health in infancy, than in any other period of life. Infants, we acknowledge, are more delicately ſenſible to injury than thoſe in advanced life; but to compenſate this, their fibres and veſſels are more capable of diſtenſion, their whole ſyſtem is more flexible, their fluids are leſs acrid, and leſs diſpoſed to putreſcence; they bear all evacuations more eaſily, except that of blood; and, which is an important circumſtance in their favour, they never ſuffer from the terrors of a diſtracted imagination: their ſpirits are lively and equal; they quickly forget their paſt ſufferings, and never anticipate the future.

Children recover from diſeaſes under ſuch unfavourable circumſtances as are never ſurvived by adults; if they waſte more quickly under ſickneſs, their recovery is quick in proportion, and generally more compleat than in older people, as diſeaſes ſeldom leave thoſe baneful effects on their conſtitutions, ſo frequent in thoſe of adults: in ſhort, a phyſician ought never to deſpair of a child's life while it continues to breathe.

In human parturition, the moſt known and ſucceſsful practitioners, if they are candid, will own, that in common and natural caſes, Nature is ſufficient; and, that their buſineſs is only to aſſiſt her efforts in caſes of weakneſs of the mother, or an unnatural poſition of the child. As ſoon as an infant comes into the world, our firſt care is to cram it with phyſic: There is a liquor in the bowels of infants, and many other animals, when they are born, which is neceſſary to be carried off; the medicine which Nature has provided for that purpoſe, is the mother's firſt milk; this, indeed, anſwers every purpoſe, and effectually; but we think ſome drugs forced down the child's throat will do much better—the compoſition of which varies,

according to the fancy of the good woman who preſides at the birth. It deſerves to be remarked, while on that ſubject, that calves, which are the only animals taken under our peculiar care in theſe circumſtances, are treated in the ſame manner; they have the ſame ſort of phyſic adminiſtered to them, and often with the ſame ſucceſs; many dying under the operation, or of its conſequences: and we have the greateſt reaſon to think, that more of that ſpecies of animals die at this period than of all others. We ſee in theſe circumſtances put together, that notwithſtanding the many moving calls of natural inſtinct in the child to ſuck the mother's breaſt, yet the uſual practice is to deny that indulgence till the third day after the birth; by that time, the ſuppreſſion* of the natural evacuations of the milk, uſually brings on a fever, the conſequence of which is often fatal to the mother, or puts it out of her power to ſuckle her child at that time. The ſudden ſwelling of the breaſts, which commonly happens about the third day, is another bad conſequence of this delay. When the breaſts become thus ſuddenly and greatly diſtended, a child is not only utterly unable to ſuck, but, by its cries and ſtruggling, fatigues and heats both itſelf and the mother: this is another cauſe which prevents nurſing. I believe it was the gentlemen who had the care of the Lying-in Hoſpital in London, who firſt had the honour, in this inſtance, to bring us back to Nature and common ſenſe; and by that means have preſerved the lives of thouſands of their fellow creatures. They ordered the children to be put to the mother's breaſt as ſoon as they ſhewed a deſire for it, which was generally within ten or twelve hours after birth; this rendered the uſual doſe of phyſic unneceſſary; the milk fever was prevented; the milk flowed gradually and eaſily into the breaſts, which before were apparently empty; and things went on in the natural way. I am ſorry, however, to obſerve, that this practice is not yet become general. If a mother is determined not to nurſe her own infant, ſhe ſhould, for her own ſake, ſuckle it at leaſt three or four weeks, and then wean it by degrees from her own breaſt; in this way, the more immediate danger ariſing from repelling the milk, is prevented. When a mother does not nurſe her own infant, ſhe does open violence to Nature; a violence unknown among the

* It is, perhaps, unneceſſary to remind our readers, that in publiſhing the communications of our Correſpondents, we by no means wiſh to be underſtood, as adopting or approving their opinions. We believe that ſeveral opinions contained in this paper, have originated in a want of opportunity to acquire the *lateſt information*, reſpecting ſome of the practices which the writer condemns. EDIT.

the inferior animals, whom Nature intended to ſuckle their young; a violence unknown to the moſt barbarous nations, and equally unknown amongſt the moſt poliſhed in the pureſt ages of Greece and Rome.

[To be continued.]

From *An Eſſay on Human Combuſtion from the Abuſe of Spirituous Liquors*, by PIEREE-AIMEE LAIR, Paris, 1 Vol. duodecimo, we preſent our Readers with the following Extracts.

THE bodies of living perſons have been known to catch fire from the flame of other bodies, and continue to burn almoſt to aſhes.

On this aſtoniſhing and little known fact, the author ventures, as he ſays, to make ſome obſervations, which are the ſubſtance of his eſſay.

He begins by remarking, that the fact itſelf may be difficult to be believed, and will find the more opponents becauſe of its rarity; and becauſe there are examples of parts of the human body, to which this fatal accident has happened, that have not been conſumed when they have not been abſolutely ſubjected to the action of the fire. But he adds, this phenomenon has been aſſerted, as true, by too many learned men, of undoubted veracity, for it to be called in queſtion. The names of thoſe he cites are Bianchini, Maffei, Rolli, Lecat, and Vicq-d'Azyr.

He enters on his ſubject by obſerving, that he ſhall have recourſe to facts; which are much more ſatisfactory than ſuppoſitions. Moſt of thoſe he cites, which are not a few, are extracted from the journals of various nations; and, with ſome ſhades of difference, offer much the ſame reſults, which are thus enumerated by the author:

1. The perſons who have been ſubject to combuſtion, have been long accuſtomed to drink ſpirituous liquors.
2. None but women have been conſumed.
3. Theſe women were old.
4. The body has not burned ſpontaneouſly, but accidentally.
5. The extremities of the body, ſuch as the feet and hands, have generally been ſpared by the fire.

6. Water

6. Water, inſtead of extinguiſhing the fire in thoſe parts that were in a ſtate of combuſtion, has ſometimes only given it greater activity.

7. The fire has little injured, and ſometimes not at all, thoſe combuſtible things that were in contact with the body when it was burning.

8. The combuſtion of theſe bodies has left a reſidue of greaſy and fetid aſhes and fat, that were unctuous, offenſive to the ſmell, and very penetrating.

It is proper to add, that often, while the fire was in the height of its action, it ſent forth little or no flame.

Having eſtabliſhed this ſeries of facts, he examines each, individually, and begins with the abuſe of ſpirituous liquors, to which moſt of the victims of this horrible death had been ſubject. In order to ſhew how this practice may render the body combuſtible, he remarks, it is generally known, that people who drink much eat little; which little is of high-ſeaſoned viands; that their urine is aqueous, and that the alcoholic parts, like all volatile ſubſtances, are but little decompoſed, penetrate the muſcles, and as it were, ſaturate the whole maſs. In proof of this he cites different caſes; of which it has been remarked, that the bodies of perſons who have died drunk, ſend forth a vinous odour long after death. But, without ſuppoſing ſo much, there are few who have not been ſenſible of the alcoholic vapours which drunkards exhale. Two conſequences reſult from a body being thus impregnated with alcohol; one is, that the vinous ſpirit dries the fleſh, ſoftens the fat, and fits them both for combuſtion; and the other, that this kind of internal and highly inflammable vapour-bath is ever ready to catch fire, and to communicate it to the body that is already thus prepared.

Combuſtion has only been obſerved to take place in women; which does not prove that men are wholly exempt from it, but that they are leſs ſubject to it than the other ſex. This propenſity the author attributes to the delicacy of the female fibres, and the leſs compactneſs of the parts of the body, which is natural to them, and their ſedentary life, rendering both the fleſh and the fat more proper to abſorb ſpirituous ſubſtances, and diſpoſe them to inflammation.

The women were old: the love of liquors is the ſucceſſor of the paſſions of youth, and is moſt manifeſt, particularly in women, in an advanced age. The little exerciſe of which this ſeaſon of life admits, encourages the increaſe of inflammable ſubſtances in the body, and thus gives place to the accident in queſtion.

Was the fire ſpontaneous? or was it communicated by an ignited

ignited body? The latter case is admitted by the author in support of his opinion. He observes, it is possible that these inflammable vapours, which emanate from the bodies of drunken people, may catch fire, and communicate it to the bodies by which they are exhaled. Persons are cited who had drunk brandy, and whose breath, kindled by the flame of a candle, had communicated the fire inwardly. In confirmation that the fire had caught by accident in all the cases he quotes, it was observed, that the remains of most of the persons were found near the fire.

The author then returns to the possibility of spontaneous combustion in the human frame; admitted by some enlightened observers. Having noticed, that these kind of conflagrations take place in the mineral and vegetable kingdoms, he cites cases of men, after drinking much brandy, that have breathed flames: but supposing these facts confirmed, he does not imagine such inflammation could totally destroy the body. To this it may be replied, according to the author's own doctrine, that since he supposes bodies may take fire from a pipe, a lighted candle, or burning coals, there is no evident reason why it might not, in like manner, take fire from a spontaneous flame, in contact with it over a great extent of surface.

Of the fifth remark, relative to the parts spared by the fire, the author supposes the cause to be in their less propensity to burn.

In proof of the sixth, he cites a familiar example of water thrown on greasy and spirituous substances, which does but augment the activity of the fire.

He attributes the little damage done to the combustible clothing of the dead body to the nature of the flame, similar to that of the alcohol. Beside which, it is observed, that the combustion is performed almost without flame, the body being slowly consumed like the pyrophore, and the nature of the ashes and grease that remain, being the same as those of all animal parts, the emanation of which has not been excited to the utmost.*

These explanations being given, the author yields to such reflections as result from, and are the end of, his inquiries. The first is, that accidental human combustion might be supposed the work of the guilty; and the innocent might thus be involved in great misfortunes. He cites, in proof, the example of a man condemned to death, in consequence of such an accident. He thence very judiciously observes, that these facts

* Dont l'emanation n'a pas été portée au dérnier dégré.

facts are as neceſſary to be known by the lawyer as the natural hiſtorian.

He concludes with preſuming, that the terror which accidents ſo dreadful muſt inſpire, were they ſufficiently known, might perhaps deter many people from the vice of drunkenneſs.

However plauſible the reaſons given in this work may be of the propenſity of certain living animal bodies to catch fire, and be thus conſumed, it muſt be owned, that were they merely hypothetical, the poſſibility of an event ſo aſtoniſhing muſt be doubted; and that nothing leſs than experience could deſtroy the incredulity felt at the recital of theſe ſtrange combuſtions: but this authority of experience is ſo well ſupported by the number and agreement of the facts, and by the character of the perſons who teſtify their veracity, that none but the obſtinate can doubt of their exiſtence.

The work is written with perſpicuity and method, is rich in well-ſelected quotations, and the arguments it contains are always ſupported by facts, and ſtated with ſagacity.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IF the following ſingular caſe, from its ſucceſsful termination, (which appears to have been effected principally by the exhibition of the Digitalis, and may, probably, merit the attention of practitioners in ſo dreadful a malady) ſhould be deemed worthy a place in your periodical publication, I offer it to your ſervice; and am,

GENTLEMEN,
With very great reſpect,
Your moſt humble ſervant,
EDMUND SHAUL.

Docking, Norfolk,
June 6, 1800.

S. O. a young women aged twenty-one years, of low ſtature, and of a feeble, florid habit, having over-exerted herſelf in walking or running ten miles in a ſhort ſpace of time; in conſequence of which, ſhe fainted, and became extremely languid and debilitated, being three months advanced in pregnancy. Symptoms of irritation, with great tendency to abortion, immediately ſupervened; but, upon examination, there was no appearance of dilatation of the os tincæ; and the vagina

gina was very much contracted, ſcarcely admitting the introduction of the fingers. She was ordered to keep herſelf in a horizontal poſition, and to abſtain from all heating liquors; an anodyne mixture was alſo adminiſtered, compoſed of the mixtura camphorata. tinct. caſtor & tinct. opii; a doſe of which was ordered to be taken every three hours. But the pains recurring at times, accompanied with a general hyſteria, I was ſent for at twelve o'clock at night, and found her labouring under an increaſe of ſymptoms, but ſtill there was no dilatation of the os tincæ. I then gave her a draught with tinct. opii. gts. 40, and æther. vitriol. increaſing the tinct opii. gradually. This affording a temporary relief, ſhe took ſome nouriſhment, and was diſpoſed to ſleep; but in an hour afterwards ſhe became violently convulſed, and every ſymptom of the moſt dreadful ſpaſmodic affection, ever witneſſed by any medical practitioner, now came on. The opiſthotonos and emproſthotonos alternately ſucceeding each other, the head and extremities were bent backwards ſo as almoſt to meet: ſoon after an action the reverſe of this took place; her chin and knees were contracted together, the muſcles of the face and her eyes were violently diſtorted, the latter being almoſt protruded from their ſockets; and during the paroxyſms ſhe frequently attempted to bite herſelf. In ſhort, every muſcle of her ſyſtem appeared more or leſs to labour under ſpaſmodic action.

In this deſperate ſtate I repeated the tinct. opii with ſome æther; but no relief being obtained, I ordered it to be given to her every two hours, and an emollient clyſter was alſo injected. This mode of treatment not anſwering my expectations, I ſent for a medical friend to ſee this ſingular and deplorable caſe; and as our preſent plan ſeemed to afford ſo unſucceſsful a proſpect, another expedient was adopted: Twelve ounces of blood were taken from her arm, and I ordered the abdomen and extremities of the body to be rubbed with an embrocation, conſiſting of the linimentum ſaponis and tinct. opii aa. ℥j; and 100 drops of the tinct. opii to be given internally, with æther. vitriol. ʒiſs. Twenty grains of the pil. gummoſæ were alſo adminiſtered every three hours, and I recommended her to go into a warm bath for ten minutes. The ſpaſms ſtill continuing, but with a leſſer degree of violence, Dr. Redfearn, a phyſician at Lynn, was ſent for to viſit her. After ſome deliberation, and having communicated to him the different remedies I had made uſe of, he ordered me to give her inſtantly 200 drops of the tinct. opii, and the following medicines were preſcribed:

℞. Emulſionis camphorat. ℥iv; tinct. opii, tinct. caſtorei aa ʒſs. Miſce. fiat enema ſtatim injiciendum.

℞. Tinct. opii, ætheris vitriol. aa ʒj; ol. succini ʒij. Fiat embrocatio toto corpori applicand. post balneum tepidum.

The following draughts were also prescribed:

℞. Emulsionis camphorat. ʒiss; tinct. digitalis purp. gt. xl; tinct. opii gt. 160; ætheris vitriol. ʒj. M. Fiat haustus tertiâ quaque horâ sumendus.

The tinctura digitalis was increased gradually to 70 drops at one dose. At last more favourable symptoms appeared; the spasms were mitigated, and she passed a tolerably easy night without being affected by them. However, on the following morning, a return of the former symptoms seemed to be rapidly coming on; her eyes were very much distorted, and the Doctor ordered the enema to be repeated with ʒij of the gum assafœtida added to it; and a bolus, composed of the different articles subjoined, to be instantly given.

℞. Opii purif. gt. vij; zinci calcinat. gt. iss; pul. digit. purp. gt. ij; piperis cayensis gt. iij. Syrup. s. s. Fiat bolus statim sumendus.

Soon after the above medicine was given, a general relaxation of the whole system succeeded, attended with nausea, and a total cessation of spasmodic action. Being extremely debilitated, a diet of wine, eggs, and coffee was prescribed, with as much nutriment in various forms as could be got down. The tinct. opii was now diminished gradually, and vegetable and mineral tonics were administered. By continuing this regimen her health became perfectly established, and she has ever since remained entirely free from any return of spasmodic action.

The quantity of the tinct. opii, taken internally at different times, in the course of three days, was two thousand two hundred and ten drops; one ounce was injected per anum, and two ounces and a half applied externally.

Experiments, by Dr. Charles Darwin.

As the attention of medical practitioners has been for some time directed to the treatment and diagnosis of Phthisis Pulmonalis; and as the distinction of the complaint, and its several stages, depend in a considerable degree upon the matter expectorated, we believe our readers will be gratified by the following Extracts from the scarce work, Dr. Charles Darwin's *Experiments establishing a Criterion between mucilaginous and purulent Matter.* An additional motive for reviving the subject at this time, is the great improvement which has been made

made in Chemiſtry ſince the year 1780, when that work was publiſhed; and the hope that ſome of our Correſpondents will be induced to favour the Public with their ſentiments on the diſtinction between aerated pus and the matter of tubercules.

Experiment I. To a drachm of very fœtid *purulent matter*, obtained from a common abſcefs, fifty drops of *vitriolic acid* were added. The acid ſunk to the bottom, while the purulent matter kept in the upper part of the glaſs; but, on the addition of about two ounces of water, the whole formed a turbid white *uniform mixture.*

Exp. II. About fifty drops of *vitriolic acid* were added to a drachm of *mucus*, coughed up from the lungs, and diſcharged from the noſe; the acid ſoon diſſolved the greateſt part of the mucus, but, on a proportion of water being added to the mixture, the mucus, which had been diſſolved, *ſwam on the top* of the fluid.

Exp. III. To fifty drops of *vitriolic acid*, diluted with about an ounce of water, were added about two drachms of pure *mucus*, coughed up from the lungs, and collected from the noſe; notwithſtanding repeated agitation, they could not be made to unite;—almoſt the whole mucus continued *afloat at the top*; and the watery fluid below loſt very little of its tranſparency, acquiring only a ſlight bluiſh caſt.

Exp. IV. On the addition of about two drachms of fœtid *purulent matter*, to fifty drops of *vitriolic acid*, diluted with about an ounce of water, an *uniform turbid fluid* of a whitiſh colour was formed, and which exactly reſembled that mentioned in the firſt experiment.

Exp. V. About two drachms of very fœtid *purulent matter* were combined by agitation with as much *mucus*. Theſe two fluids were ſo blended together, that no difference could be perceived. To this was added a mixture of fifty drops of *vitriolic acid* with two ounces of water. In a ſhort time the fluid in the under part of the glaſs had the ſame turbid appearance as in Experiment firſt and fourth, while the mucus apparently deprived of purulent matter ſwam on the top.

Exp. VI. All the five glaſſes mentioned in the preceding experiments, were allowed to remain at reſt about half an hour, during that time the glaſſes mentioned in experiments ſecond and third, which contained the mucus, remained unchanged. But the firſt, fourth, and fifth depoſited each a white coloured ſediment in conſiderable quantity; the fluid above the ſediment in firſt and fourth had become ſomewhat more tranſparent, but ſtill continued of a white colour. In the fifth the mucus continued to float on the ſurface as before

Exp. VII. The *mucus* collected from the top of the fifth was put into another glass, and an ounce of water impregnated with fifty drops of *caustic alkaline* lixivium * was added; but *no union* or solution could be produced even by the aid of triture.

Exp. VIII. Fifty drops of the *alkaline lixivium* were added to each of the phials No. 1, 2, 3, and 4; when 1 and 4 were agitated, the white sediment was again diffused in them; but, in a short time it subsided, leaving the liquor above of the same whitish colour as before the addition; the agitation of 2 and 3 had no effect in producing any union farther than before, the mucus in both still continuing to float on the surface.

Exp. IX. The *mucus* used in 7 and 8 was again put into a glass by itself, and about two drachms of *caustic alkaline* lixivium added to it. In this, by the aid of agitation, it was soon *completely dissolved*, losing entirely its viscidity, and leaving a froth on the top.

Exp. X. Two ounces of water added to the solution of *mucus in alkali*, No. 9, produced no decomposition; and had the effect only of giving the fluid a greater transparency; no change was produced on this fluid, when allowed to remain at rest for the space of half an hour, except that the froth on the surface disappeared.

Exp. XI. To half the liquor of 10, about a drachm of *nitrous acid* was added; the mixture became of a more turbid and white colour, but no deposition took place.

Exp. XII. A similar change of colour took place on the addition of a certain quantity of the *muriatic acid* to the remaining half of No. 10. But, even after the mixture had stood for half an hour, no sediment had fallen to the bottom of the vessel.

Exp. XIII. When the white coloured liquor on the surface was poured off from No. 1, 4, and 5, each of which deposited a sediment resembling *pus*, the sediments were again observed to emit a very fœtid smell. To these sediments, collected in one glass, about two drachms of *nitrous acid* were added. The mixture for a little time appeared uniform, but in a few minutes a thick white cloud was observed on the top of it, the liquor below being of a wheyish colour.

Exp. XIV. To the liquor, No. 13, was added about two ounces of water: The cloud which before swam on the surface, was, on slight agitation, uniformly diffused through it; and when the mixture was allowed to remain at rest for a short time, a sediment

* Pharmacop. Edinens.

ſediment fell to the bottom, exactly reſembling that which had appeared in Obſervation 6, to have happened in Experiment 1, 4, and 5; and this ſediment, when the fluid above was poured off, had alſo a fœtid ſmell.

[To be continued.]

To the Editors of the Medical and Phyſical Journal.

Gentlemen,

THEORETICAL diſquiſitions and controverſial communications are, perhaps, in ſome meaſure, foreign to the deſign of your publication, as tending to the excluſion of what may be conceived more immediately important and beneficial to the medicinal art: Encouraged, however, by former indulgences, and fully conſcious of the extreme liberality which has hitherto characterized the Medical and Phyſical Journal, I have taken the liberty of again intruding on your notice, by making ſome Obſervations on the *modus operandi of Febrifuge medicines*; or, rather, of ſuggeſting a few hints on this ſubject, and ſubmitting them, with the utmoſt deference, to the Medical Public, through the medium of your uſeful and inſtructive Miſcellany. —To this I am more particularly induced, in conſequence of a miſrepreſentation of a few remarks of mine, inſerted in one of your former numbers. That Dr. Huggan ſhould conſtrue my obſervations on his opinions into an oblique imputation of Enthuſiaſm to his encomiums on *opium* in the cure of *febrile diseases*, or a recommendation of *venæsection* in inflammatory fevers, appears altogether unaccountable; as I confidently maintained and aſſerted, on the authority of my own experience, the extreme utility of the former, and the baneful tendency of the latter, in fevers of every deſcription; and I have not the leaſt doubt, that the Doctor's practice in theſe complaints is in exact conformity with my own, though the principle and theory upon which ſuch practice is conducted, may in ſome degree differ.

The ſcience of medicine has, within a few years paſt, received very conſiderable and important improvements, in conſequence of a greater attention having been lately paid to the *causes* than the mere *phenomena* or *symptoms* of diſeaſes; and in no inſtance, perhaps, has this alteration in medical practice been more manifeſt or beneficial, than in the treatment of thoſe complaints which, from their generality and frequency of appearance,

pearance, may be conſidered as *endemics* in this climate, viz. *fevers*. I humbly conceive, however, that, notwithſtanding the improvements which have been already made, and the comparative ſimplification which has obtained, we are far from having arrived at a ſtate of perfection, either in this or in any other department of the healing art.

A derangement of the nervous ſyſtem, occaſioning *general debility*, is an invariable attendant on fevers of every denomination; and to this ſingle cauſe, *debility*, are all the ſymptoms which occur, under different circumſtances of *conſtitution*, *ſituation*, *habit*, &c. of the patients to be referred: for, notwithſtanding the minute diviſion and extenſive claſſification which have been adopted (and, doubtleſs, with great propriety) by noſological and ſyſtematic writers on febrile affections, there appears to be no ſpecific or abſtract difference in the diſeaſes themſelves, the variety of appearance which they aſſume being totally dependent upon the ſtate of the conſtitution receiving the affection. Thus, the ſame cauſes operating upon a perſon of a ſanguine temperament and plethoric habits, ſhall occaſion the diſeaſe which has obtained the appellation of *inflammatory fever*, with ſymptoms of vaſcular excitement; which, on a patient of a contrary deſcription, will be productive of a *typhus* or *nervous fever*.

In what ſpecific manner the malign powers exert their influence on the ſyſtem, ſo as to occaſion that deviation from the healthy ſtate, which gives riſe to the phenomena of fever; or, in other words, what is the proximate cauſe of fever, is not my intention here to enquire; as I conceive it to be a matter of ſlight conſequence to aſcertain; the minutiæ of theory being more calculated to diſplay ingenuity, and amuſe ſpeculatiſts, than to afford any material information; and an attention to rational principles and conduct in *practice*, is far preferable to thoſe *theoretical refinements*, and *fanciful hypotheſes*, which are, in the preſent day, by far too prevalent. I do not mean, by this aſſertion, to give the ſmalleſt encouragement to that empirical mode of practice, which pretends to preclude the neceſſity of all reaſoning *a priori* in medicine—far from it. No one, who judges impartially from premiſes, will accuſe the Poet of advancing any thing in favour of FREE-THINKING, when he aſſerts, with reſpect to modes of faith,

"*His can't be wrong whoſe life is in the right.*"

his deſign being merely to ſhew the ſuperiority of *practical piety* over *doctrinal diſtinctions*, *theological diſputations*, or *religious fanaticiſm*.—But, to return, the *counteraction of nervous debility* being the principal objects to which the attention ſhould be directed, in the treatment of febrile complaints, the

utility

utility and abſolute neceſſity of proceeding upon a *ſtimulant plan* of cure becomes obvious; and thus is the equal benefit derived from the exhibition of *opium* (one of the moſt powerful of all nervous ſtimuli) in inflammatory, typhus, or any other fever to be explained; this important and truly valuable medicine decreaſing the ſtrength and number of pulſations, in thoſe fevers which are characterized by ſymptoms of arterial ſtrength and vaſcular excitement, and producing effects exactly oppoſite, where occaſion requires.

That the advantageous effects of opium are to be referred ſolely to its *ſtimulating quality*, is alſo evident from the equal ſucceſs attending its adminiſtration in the *cold* and *hot* ſtages of an intermittent; which is a fact I have fully aſcertained from experience.

Nothing can poſſibly be more erroneous in theory, or injurious in practice, than the *antiphlogiſtic* plan of treatment in febrile diſorders; and *depriving* the animal machine of its only ſupport, at a time when its functions are impeded, or rendered irregular, ſolely in conſequence of *debility*, or *deficiency* of *excitement*, has been productive of incalculable miſchief!

How then, it may be urged, are we to account for the undeniable benefit which has attended the exhibition of *antimonial preparations*, *nitre*, and other medicines of the *refrigerant* claſs?—A very general miſunderſtanding ſeems to have obtained with reſpect to the action of theſe medicines; for a minute examination into their effects, will ſhew the propriety of ranking them in the claſs, not of *antiphlogiſtics*, or *refrigerants*, (which, by the way, are indefinite terms) but of *ſtimulants*. To illuſtrate this doctrine, it will be only neceſſary to recollect the conſequences frequently produced by the adminiſtration of antimonials in the incipient ſtate of a *nervous fever*. When the quickneſs, ſmallneſs, and irregularity of the arterial pulſations, diſtreſſing pains in the head, extreme oppreſſion of the mind, and other ſymptoms are preſent, denoting the higheſt ſtate of *nervous debility*, a doſe of *pulv. antim.* in ſuch quantity as to create a ſlight naufea of the ſtomach, will often reduce the pulſe to its proper ſtandard, and, by inducing a regularity and due proportion between the action and re-action of the ſyſtem, will effectually arreſt the further progreſs of the diſeaſe. Can theſe effects be accounted for upon any other principle than a ſympathetic excitement of the nervous ſyſtem, from the temporary derangement in the functions of the ſtomach?*

With

* Would not *mercurial oxyds*, or any other mineral preparations, adminiſtered with care and attention, be productive of equal advantages with antimonial medicines? and is not the benefit derived from the exhibition of *arſenic. alb.* in fevers, to be referred to its operation on the ſtomach?

With reſpect to *nitre*, its uſe in *ſcrophulous* and other diſeaſes, originating in *debility*, and an inactive ſtate of the living powers, as well as the experiments of Dr. *Percival* and others, prove it to poſſeſs a ſtimulating property, which is alſo further corroborated by the extraordinary ſucceſs attending its adminiſtration in *typhus*, as related by Dr. *Wood*; and a caſe is ſomewhere mentioned, of an inflammation of the ſtomach ſupervening upon an over doſe of this medicine, which is contradictory to the ſuppoſition of its acting as a refrigerant. I am moreover informed, that people who are in the habit of taking a large quantity of *acids*, and ſubſtances containing much oxygen, are conſtantly found to have their blood in a *sizy state*.

The above remarks are by no means intended as a recommendation of an indiſcriminate and invariable mode of practice in all kinds of fevers; ſuch a doctrine could only be founded in abſurdity, and dictated by phrenzy; but are merely for the purpoſe of endeavouring to ſimplify the curative indications, and thus to improve the treatment of thoſe diſeaſes, which, on account of their univerſality, and frequent danger, demand the particular attention of the medical practitioner, and in which an erroneous practice has been productive of more miſchievous conſequences, and fatal effects, than probably the diſeaſes themſelves would have occaſioned, had they been left entirely under the guardianſhip of Nature. I am,

GENTLEMEN,

With the greateſt reſpect,

Your obedient ſervant,

DAVID UWINS.

Grenville Street, London,
June 13, 1800.

Reflections on the Case of a young Girl, who died with Symptoms of Hydrophobia.

By C. BOSQUILLON, Phyſician to the Chief Hoſpital, (Grand Hoſpice) at Paris.

I HAVE proved (ſays the Doctor) in my Commentaries on the Elements of Practical Medicine by CULLEN, that terror alone may determine the ſymptoms of hydrophobia or madneſs, in thoſe who had been bitten by an animal ſuſpected to be attacked with this diſorder. Numbers of perſons have been ſeen to labour under ſymptoms of this nature, and to recover on being informed that the dog that had bitten them was not mad. There are others, on the contrary, have become ſuddenly hydrophobial

drophobial on learning, at the end of a conſiderable time, that the perſons bitten at the ſame period with themſelves had died with ſymptoms of hydrophobia. The informations which I have received on the caſe of the young perſon in queſtion, have convinced me that terror alone produced all the terrible effects which ſhe had experienced. She was bitten the 11th Frimaire, (Dec. 1,) by a little dog of ſix months old, naturally ſnappiſh; it had, however, never ceaſed to obey the orders of its maſters, nor did it appear to know them leſs than uſual; its eyes had nothing menacing in their look, nor was there any froth about the mouth. The family was juſt informed of a perſon recently dead by madneſs; it was imagined that this little dog was attacked by the ſame malady; they reſolved to drown it, and this they did without aſſuring themſelves of the apprehended fact.

What an impreſſion might not this be ſuppoſed to make upon a girl of fourteen years and a half, extremely ſenſitive, and of a very lively imagination! From this moment ſhe became deeply thoughtful; about forty days afterwards ſhe hurt the finger bitten, in attempting to cleave a piece of wood; the cicatrice of the wound where ſhe was bitten opened again, and her uneaſineſs greatly increaſed. During the periodical evacuation incidental to her ſex, ſhe had occaſion to put her hands in cold water; a ſuppreſſion took place, and that was followed, the 30th Nivoſe, (January 19,) fifty-one days after the bite, with a violent head-ach accompanied with fever, a contraction of the throat, a frequent ſneezing, and unquenchable thirſt. Fumigations were made uſe of to relieve the head-ach, but preſently univerſal tremblings and convulſions took place. She drank with perfect eaſe till the 2d Pluvioſe (Jan. 21), when ſhe let fall a glaſs of water which her mother offered her; her hand and her whole body, her countenance eſpecially, were at that inſtant greatly agitated by convulſive movements. Thoſe about her, being greatly frightened, occaſioned her to be conveyed that ſame evening to the Great Hoſpital. She was much affected to find they tied her in her bed, which it is the cuſtom to do with hydrophobial patients. She paſſed the night in a diſturbed condition; the next morning ſhe puſhed back a glaſs of water they offered her, and fell into convulſions; ſhe was, nevertheleſs, very thirſty. They made her drink out of a biberon; ſhe ſwallowed the liquid with precipitation, and complained even that they did not pour it out faſt enough. She preferred water tinctured with red, or mixed with a little ſweet orange-flower water; but at every time ſhe ſwallowed, the convulſive movements returned: nevertheleſs, ſhe endured the ſight of a large veſſel which was brought to her for the purpoſe of bleeding her in the foot. Her feet were left in it a

long time, and ſtill ſhe did not fall into convulſions. Her imagination became greatly inflamed; ſhe talked with much volubility, and bitterly complained that ſhe had heard nothing but of madneſs ſince ſhe was bitten. I ſaw her the 4th Pluvioſe (January 23,) an hour before her death; ſhe was greatly dejected and ſunk down, and had a pale, waſted countenance; every thing announced that ſhe was out of the reach of all relief. Hydrophobial patients, on the contrary, generally die in ſtrong convulſions, which come on even frequently at the inſtant when we think them better. Their colour changes but little; which, without doubt, has given reaſon for the world to believe that they have been ſtifled to death; moreover, the convulſions have only appeared the third day of the diſorder; they have been preceded by fever, and a contraction of the throat, apparently the effect of inflammation in the œſophagus and the trachea arteria; indeed, it can hardly be doubted but that is the caſe, when we conſider the extraordinary quantity of ſaliva, and of mucus, with which we find theſe parts filled after death, and of the redneſs throughout them. In ſhort, the true hydrophobia, as well as other convulſive idiopathic diſorders, is never preceded by fever; it comes on at once. All this proves therefore that terror alone threw this young girl into the frightful ſtate which occaſioned her death.

It was neceſſary, in order to preſerve her, that thoſe who ſurrounded her ſhould have taken quite a contrary courſe to that which they obſerved, and have compoſed and comforted her mind; and, above all, have perſuaded her that the animal was not mad. Tranquillity of the mind alone may keep off this cruel diſeaſe. It becomes eſſential then, as well for thoſe who have been bitten, as for the progreſs of the art, to keep the dogs, or other animals, ſuppoſed mad, ſhut up ſafely in a convenient place for five or ſix weeks; the madneſs always ſhows itſelf in the courſe of this time, and they die in a few days when the hydrophobia comes on. When they are attacked by any other diſorder, the proof of what it is is ſoon obtained. By ſuch a procedure we may avoid creating a great many torments or apprehenſions, at leaſt in thoſe who have been bitten by ſuch animals; we ſhould not be obliged to keep them, for two months together, tied down in their beds, as is the common cuſtom, ſubjecting them to a treatment which may well augment their fears, and determine or fix that diſorder which it is our deſign to prevent. It is proper alſo that the public ſhould know, that it is proved that in all thoſe who have been bitten by animals with the hydrophobia, a twentieth part at moſt experience the ſymptoms of hydrophobia, and that theſe are generally perſons of minds the moſt ſenſitive, and ſubject

to

to alarm. I do not know that children, who have not attained the age of reafon, have ever experienced thefe fymptoms.

Paris, 20th Pluviose. BOSQUILLON.

To the Editors of the Medical and Phyfical Journal.

GENTLEMEN,

IN looking over Profeffor HUFELAND's deservedly celebrated Treatife on Scrofula,* I was ftruck with the following cafe, which he confiders as an uncommon one, and fays, that he had never heard of any thing fimilar, except fome cafes related by *Hillary* in his *Observations on the Diseases, &c. of Barbadoes.* I have been induced to tranflate it, as I do not know that the original work has yet appeared in an Engliſh dreſs, and hope you will do me the favour to infert it in your excellent Journal. I have added a cafe, which I had an opportunity of obſerving a few years ago, fo nearly fimilar that they may be confidered as analogous. I am,

GENTLEMEN,

His Majeſty's Ship, Pelican, Plymouth, June 10, 1800. Your obedient fervant, JOHN BELL, Surgeon.

" A Species of Elephantiafis from a Scrofulous Cauſe."

" A girl of a ſcrofulous habit, who had frequently running ears, ſore eyes, and other ſymptoms of a ſcrofulous ſtate during her infancy, had paſſed very favourably through the ſmall-pox in her eleventh year, and had enjoyed a good ſtate of health for the two ſucceeding years, was attacked in her thirteenth year with a ſwelling in the left foot, which ſoon extended to the calf of the leg. After ſome general internal and external remedies had been uſed, the tumefaction diſappeared, but returned in a ſhort time, and increaſed to ſuch a degree, that it extended from the toes up to the hip: the leg was more than double the ſize of the other, rather cold than warm, pale, and the ſwelling ſo hard, that no impreſſion could be left on it with

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* See *Hufeland Ueber die Natur, Erkenntniſſmittel, und Heilart der Skrofelkrankheit, &c.* 2d edit. *Jena,* 1797.

the finger. The patient was in other reſpects apparently healthy, had a blooming hue on her countenance, and a cheerful temper, but had ſometimes pain and reſtleſsneſs; the natural and vital functions were good.

" After having thus paſſed a period of ſix months without uſing any medicine, a phyſician was conſulted, who treated her chiefly with evacuants and laxatives. From this time ſhe became very languid, loſt her colour and appetite; the foot got no better, and the idea of curing her being abandoned, ſhe in a few months acquired her former ſtrength and cheerfulneſs.

" Some time afterwards a veſicle appeared on the inſide, a little above the knee of the diſeaſed leg, from which a yellowiſh watery fluid was diſcharged. This diſcharge ceaſed ſpontaneouſly, but returned in a ſhort time, when the matter took on the appearance of curdled milk, and became ſo corroſive, as to excoriate the ſurrounding ſkin. The leg became ſtill larger and harder, and the ſkin in many places felt knotty, and as firm as leather; the other leg remained perfectly ſound. About this time ſhe was attacked occaſionally with violent feveriſh paroxyſms, attended with anxiety, delirium, and congeſtions of blood in the head, which were cauſed by the near approach of the natural period of menſtruation.

" Some months afterwards, when ſhe had attained her ſixteenth year, and the diſeaſe had been of three years ſtanding, ſhe was ordered to take *ſpongia uſta*, *radix ſerpentariæ*, *pilulæ ſcillæ*, and *decoctum ligni guiaici*; fomentations of herbs, with *camphor* and *volatile alcali*, were applied externally to the leg, and *aqua lytharg. acet. comp.* to the ſore.

Theſe medicines cauſed diarrhœa, and ſometimes vomiting, and increaſed the urinary diſcharge, but the leg got no better, except that the ſore was dried up: the medicines were continued. A few weeks afterwards ſhe had another attack of the feveriſhneſs mentioned above, with anxiety, delirium, and diſordered circulation, which continued for ſome days; and immediately afterwards, the diſeaſed leg was ſomewhat ſofter, and acquired a red and purpliſh colour. A ſhining and very tenſe tumour aroſe under the calf, in which the patient complained that there was a violent and painful pulſation.

" She continued the ſame medicines, with the addition of Hoffman's ſublimate pills. A fortnight afterwards the tumour under the calf of the leg inflamed greatly, burſt, and diſcharged a yellow-coloured pus, and the ſore above the knee alſo broke out again. In a little time the leg became ſomewhat ſmaller.

" For a whole year after this, the moſt active medicines, as *hydrarg. muriat. pulvis plummeri*, *arnica*, *aſſafœtida*, *zinc. vitriolat*, *cicuta*, friction with *ungt. hydrarg. fort.* fumigations with

with *hydrarg. sulphurat. rub.* warm baths and ſhower baths, with chalybeate and ſulphurcous waters, were made uſe of.

" The ſize and hardneſs of the leg were not diminiſhed by theſe means, but rather ſeemed to become more conſiderable. Beſide the ſores already mentioned, ſeveral hard glandular tumours appeared, which inflamed, ſuppurated, and diſcharged an acrid lymph, which often cauſed great pain in the ſurrounding parts. She had feveriſh attacks from time to time, which continued a few days, and generally left the leg much worſe. Her menſes appeared in the middle of the year, without in the leaſt changing this dreadful evil.

" At the cloſe of the year, the leg was of a monſtrous circumference, felt hard and ſcirrhous quite up to the hip, and was in many parts covered with ſcabbed, ſuppurating, and inflamed places. What is very remarkable, the growth of the patient went on; her menſes were regular, ſhe ate and drank with an appetite, and all her functions were natural. The diſeaſe remained entirely topical.

" In this way ſhe remained for three years longer, during which the diſeaſe ſtill increaſed, and died at laſt from hectic fever and atrophy.

" I take this, which is certainly a very remarkable caſe, from the papers of my late revered father. From every ſymptom, and from the whole tenour of the diſeaſe, it is evident that it was nothing more than a diſeaſe of the glands and lymphatic veſſels of the part, and therefore a ſcrofulous diſeaſe; and hence it is apparent to what a dreadful height it may arrive, and likewiſe for what a length of time it may remain merely topical.

" With reſpect to the appearance which the diſeaſe here took on, I have read of nothing ſimilar, except the caſes which Hillary deſcribes under the appellation of Elephantiaſis, the diſtinguiſhing ſymptoms of which were a monſtrous hard glandular ſwelling of one leg, a totally indurated cellular membrane, and a rough, irregular, and ſcaly ſurface, with which the patient often lived, for twenty years, without any other function being diſturbed by it. He alſo remarks feveriſh attacks from time to time, which invariably increaſed the evil, and threw freſh metaſtaſes on the diſeaſed leg."

A girl of thirteen years of age was ſeized with general ſwelling of the left leg, from the knee to the ancle; and it was ſo painful that ſhe could not bear to have it touched. It looked a little red for a few days, and afterwards became pale; but without any diminution of pain, though the ſwelling rather decreaſed.

creaſed. A week afterwards ſhe was attacked with feveriſhneſs, thirſt, reſtleſsneſs, and great heat of the ſkin, for which ſome laxative medicines and antimonials, with opiates at night, were ordered; and the leg was rubbed, whenever ſhe could be prevailed upon to ſubmit to it, with *ungt. ceræ* and *calomel.* About a month after the firſt attack, the pain became more violent; ſhe could not be prevailed on to lay down in bed, but conſtantly ſat in an elbow chair, with the foot reſting upon a pillow on the floor. She could not now bear to have it rubbed, or even to wear a looſe ſtocking or bandage, and was afraid to let her petticoats touch it. In this way it continued about ſix months with little variation, except that the whole leg became œdematous and greatly ſwelled, ſo as to be of more than three times its natural ſize.

The ſkin and cellular membrane ſoon became indurated from below the knee down to the toes, poſſeſſed very little feeling, and felt hard and firm like leather; yet ſtill ſhe complained of violent deep-ſeated pain, and ſcreamed out in great agony if any one attempted to move her. At the end of a year, ſeveral ſcirrhous-like tumours, of the ſize of a filbert, appeared on different parts of the leg and foot, which inflamed, ſuppurated, and diſcharged a thin, curdled ſerum; they were not very painful.

In this way ſhe continued for another year, the leg increaſing in thickneſs, and the ſkin and cellular ſubſtance growing ſtill harder; and during this period ſhe was ſubject to frequent feveriſh attacks, which reduced her ſtrength greatly, and wore her down to a mere ſkeleton.

Towards the cloſe of the year, an abſceſs, of conſiderable ſize, appeared on the *trochanter major* of the left thigh, which burſt, and diſcharged at firſt a large quantity of good pus, which was ſoon changed to a thin ſerum; and after having been ill above two years and a half, ſhe died during one of the feveriſh attacks, already mentioned, without ever having lain down in bed during that period, after the firſt month.

It was thought from the firſt, and during the progreſs of the diſeaſe, to be a caſe of *Necrosis Ossium*; but on examining after death, no ſuch diſeaſe was found, for the bones of the leg and foot were ſound, but rather ſofter than uſual. The adipoſe membrane, which contained a great quantity of ſerum in its cells, and the ſkin, were found to be the ſole ſeat of the diſeaſe.

A variety of medicines were tried in this caſe, but without the leaſt good effect, and ſhe only experienced relief from large doſes of opium.

To

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

THROUGH accidental delay, your Journal for April has but juſt reached me; in that Number is a paper from Dr. Sherwen, in which he complains, in an epithet not leſs *harſh* than *unmerited*, of my having unneceſſarily reflected on the correctneſs of his experience in the medicinal efficacy of Fox-glove.* Your indulging me with a few words in explanation, will probably adjuſt the miſunderſtanding, by convincing even the Doctor himſelf, that the remark alluded to, was not (to borrow his own language) "*unneceſſary, and therefore not impertinent.*"

I repeat that the Doctor has, apparently, with the moſt humane intention, cautioned againſt the free uſe of Fox-glove; but that the ground of his dread, reſpecting its producing ſiniſter effects, exiſts in his having not employed it ſo extenſively as has occured to me to do in numerous inſtances, without having witneſſed any pernicious conſequence to acrue from it.

With whatever benevolence of deſign a medicine may be objected to, as being "*inſidious*" in its operation, and *poſſeſſing* "*deleterious* and *poiſonous properties*," the caution cannot be admitted as founded on *accurate experience*, when it is well known, that it may be adminiſtered in all ages and temperaments, and in much larger doſes than many articles of the materia medica, *e. g.* corroſive muriate of quickſilver, arſenic, tartariſed antimony, &c. without inconvenience.

The moſt ſalutary medicines, by abuſe, may indiſputably prove the moſt deadly poiſons; but, for that reaſon, to decry them as poſſeſſing poiſonous properties, and unfit for popular employ, might ſerve injuriouſly to check a due inveſtigation of their powers, by thoſe even who might be fully competent to the reſearch.

The ſubject of diſpute then centers merely in, whether it be neceſſary to denounce a medicinal ſubſtance of acknowledged ſalutary powers as poiſonous, becauſe it might prove ſo by injudicious uſe? or to rank it among the moſt efficient agents, capable of being employed within certain limits, without any riſk of producing deleterious effects? In the latter eſtimation I am inclined to hold Fox-glove, as moſt conducive to the ultimate

* Vide Medical and Phyſical Journal, Vol. III. p. 122.

timate eſtabliſhment of its real powers. Nor, in my apprehenſion, is much to be feared from the popular uſe of this remedy, under the reſtrictions uſually promulgated relative to a powerful medicine. I can feel no alarm for a dropſical or conſumptive patient infuſing the leaves of Fox-glove in the form of tea, and beginning with a table ſpoon full of it, gradually increaſing the doſe to a common tea-cup full. The nauſea induced by a ſlight exceſs of this medicine, will operate as a ſafeguard to its undue adminiſtration. It requires, indeed, no ſmall addreſs to prevail on a patient who has been ſeverely ſickened by an over-doſe of Fox-glove, to recur to its uſe; hence it may be preſumed, that fewer inſtances of its proving poiſonous in domeſtic employ would occur, than of its arreſting and curing deſtructive diſeaſes.

Dr. Sherwen's avowed experience of the ſucceſsful uſe of the ſeeds of Fox-glove, is implicitly credited by me; the trial was judicious, and, to my knowledge at leaſt, original. It deſerves to be repeated, on the Doctor's ſtatement of their ſuperior efficacy. No opportunity ſhall eſcape me of ſubjecting them to the teſt of experiment; yet, a poſteriori, it muſt be confeſſed, that much identity between the ſeminal ſtructure and the organic development of vegetable ſubſtances, cannot be reaſonably expected. The various ſecretions, depoſitions, and arrangements which obtain in the fully evolved vegetable, do not preſent in the germen; a ſuſceptibility only for theſe effects, under ſuitable agency, exiſts in that embryon ſtate.

The medicinal efficacy of plants is probably referable to the conſtitution of principles, reſulting from the peculiar organic actions of the different parts of the vegetable fabric.

This remark is not intended to diſparage the authority of Dr. Sherwen's experience; it would appear from his teſtimony, that the powers of the Fox-glove were really concentrated in the ſeed. This fact would likewiſe warrant me in making trial of the roots of Fox-glove, as probably poſſeſſing alſo the native energies of the plant in ſuperior perfection.

I cannot approve of Dr. Sherwen's propoſal of drying the Fox-glove in a ſtrong expoſition to the ſun. Are not the ſenſible properties of all plants leaſt diminiſhed in drying, when the proceſs of exſiccation has been carried on in ſecluſion from ſolar light? And, on parity of reaſon, are not the remote and proximate arrangement of principles (on which medicinal efficacy muſt eſſentially depend) alſo liable to be more deranged by the decompoſing power of light, than by ſlow exhalation produced by moderate temperature in a dark ſituation?

It appears to me that a preferable mode for drying Fox-glove, in common with all other plants intended for medicinal

uſe

uſe, is, to ſtrew the recent leaves on the ſurface of tin plates, and introduce them into an *oven* previouſly heated, and kept to about the temperature of eighty degrees of Fahrenheit's thermometer. If the mouth of the oven be ſtopped during the proceſs, every adventitious influence from light and air will be ſufficiently precluded. In this heat the humidity of the plant will be ſpeedily, equally, and uninterruptedly detached, leaving the elementary and conſtituent principles in as near a ſtate of native arrangement, as the ceſſation of organic life can admit.

A caſe of hæmoptyſis, of three weeks ſtanding, in a married lady, aged about twenty-five, under circumſtances of ſtrong conſtitutional tendency to pulmonary conſumption, has been lately cured by the tincture of Fox-glove under my direction; it afforded ſpeedy relief; was taken during three weeks; more than thirty drops could not be borne without nauſea. The pulſe occaſionally intermitted under its influence; was raiſed from a ſmall, hard vibration, to much comparative ſoftneſs and fullneſs, but uniformly exceeded in frequency the natural ſtandard.

It has alſo been ſucceſsfully employed by me, within theſe few weeks, in two other inſtances. One, an elderly man, ſuffering under habitual aſthma, with urgent cough and rapid emaciation. Not having any of the tincture at hand, the powder was ſubſtituted, in doſes of one grain three times a day. Its efficacy was ſtrongly felt in the courſe of a week, in the abatement of cough, return of appetite, and other convaleſcent changes. No nauſea nor ſenſible impreſſion on the pulſe was produced, it ſteadily retained a morbid hardneſs and frequency. The patient is now perfectly free from cough; reſpires with tolerable freedom, but complains of undiminiſhed debility.

The other was a boy, about ſixteen years of age, who had been afflicted nearly two months with febrile paroxyſms, recurring every evening, cough, dyſpnœa, mucous expectoration, preternatural tenſion of the abdomen, and an icteric diſcolouration of the whole ſkin. The tincture was taken upwards of three weeks; not more than twenty drops could be endured; its operation was moſt ſtrongly ſoporific; the patient was rendered ſo extremely and diſtinctly comatoſe by its agency, that, in a few minutes after taking it, he would irreſiſtibly fall aſleep, and that ſo ſoundly, and durably, as to require at times to be actually rouſed from his lethargic ſtate. His diſpoſition to ſlumber, after the firſt week of employing the Fox-glove, was ſo inſuperably ſtrong, that he could not, without much effort, either raiſe his chin from his cheſt, or open his eyes, to relate how he felt. He deſcribed his ſenſations, however,

as being agreeable, and expreſſed his firm perſuaſion that he gained ground daily. The recurrence of the febrile paroxyſms was ſoon obviated, and every other ſymptom progreſſively amended, excepting the ſallow hue of the ſkin. The pulſe did not intelligibly correſpond with the effects produced, it was neither ſenſibly retarded, nor ſtrengthened, but continued morbidly quick and feeble. The friends of the patient deſiſted from proſecuting the uſe of the medicine, from a belief that his recovery was ſufficiently advanced.

An additional proof of the *inſufficiency* of Fox-glove, in the cure of the *laſt ſtage* of pulmonary conſumption, has been recently afforded by the fatal termination of the caſe of a young man under my care, to whom it had been freely exhibited in every variety of form, and under the moſt approved collateral regulations, during three months, with no farther benefit than temporary alleviation; latterly, it became quite inert, unleſs given in doſes of ſixty drops, when noxious ſickneſs occaſionally enſued. It was at length relinquiſhed as *uſeleſs*, when the ſubſtitution of ſmall doſes of opium, in a diluted ſolution of ſulphuric acid, taken at ſhort intervals, produced the moſt gratifying palliative effects. I am,

GENTLEMEN,

Your's, very reſpectfully,

Chilton, ſuper Peldon,
June 19, 1800.

R. KINGLAKE, M. D.

CRITICAL

CRITICAL RETROSPECT

OF

MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

Tranſactions of a Society for the Improvement of Medical and Chirurgical Knowledge. Illuſtrated with copper-plates. Vol. II. 8vo. pp. 380. *London,* Johnſon. 1800.

THE deſign of this work is ſimilar to that of Duncan's Annals of Medicine, or Dr. Simmons's Medical Facts. It appears to be the intention of the editors to admit original papers only; and while they are ſupplied by ſuch names as ornament the preſent volume, there can be no doubt that the work will maintain its popularity.

This volume contains twenty-nine papers on ſome of the moſt intereſting ſubjects of medicine and ſurgery, from which we ſelect the following extracts.

Account of a Caſe in which Death was brought on by a Hæmorrhage from the Liver. By G. BLANE, M. D. F. R. S. &c. *Read May* 6, 1794.

" A BOY, aged eight years, of a delicate conſtitution, ſmall ſtature, and pale complexion, whoſe family on the father's ſide had been extremely ſubject to phthiſis pulmonalis, but he himſelf having no ſymptoms of ſcrofula or rickets, or any external blemiſh or deformity, except that his belly had always been too large, and he had been ſubject to complaints of the ſtomach and bowels through life, began to complain on the 12th of March, 1794, of languor, loſs of appetite, and ſlight pains, which he referred to his breaſt and ſtomach. Theſe ſymptoms continued the ſame next day, but became more ſevere on the 14th, and remained ſo the three following days, on the laſt of which he became feveriſh, and there was an eruption of red ſpots on the neck and breaſt, which laſted only a few hours. On the 18th and 19th, the ſymptoms were milder, and he was thought to be recovering; but in the night between the 19th and 20th, he was ſeized with a ſevere pain, which he referred to the left hypochondrium. This continued between five and ſix

hours, and he then became ſuddenly faint, and loſing all ſenſe and motion was thought to be in a ſwoon, but from this he never recovered.

" This is the account which I received from the family and the medical gentleman who attended, for I did not ſee him during his illneſs; and not having been ſent for till he was in extremities, he had died before I arrived.

" Leave was obtained to examine the body, and the following appearances were obſerved. Upon laying open the abdomen, a large quantity of coagulated blood was diſcovered, covering the whole left ſide of the inteſtines. In exploring the ſource of this, ſeveral fiſſures were obſerved in the left lobe of the liver, which were about two-thirds of an inch in length, whence the blood had undoubtedly flowed, for they were found to lead to a cavity in the ſubſtance of the lobe of about the ſize of a pigeon's egg, and full of blood. The peritonæum, on the ſurface of that part of the liver which was near one of the fiſſures, was raiſed from the liver like a bliſter, full of coagulated blood. Theſe appearances were on the lower ſurface of the lobe, but on the upper ſurface of the ſame lobe there was one fiſſure, round which was a ſimilar collection of blood between the peritonæum and the ſubſtance of the liver, and it led to a ſmall bloody cavity near the ſurface of the liver.

" There was no external livor, or other mark of injury either on the adjacent *parietes*, or on the ſpleen or inteſtines.

" It ſeems moſt probable therefore, that the rupture and conſequent hæmorrhage were owing to the weak ſtructure of the liver, which correſponded with the general weakneſs of this young perſon's frame.

" It would appear that it is this weakneſs, proceeding from a too great tenuity of the coats of the veſſels, that chiefly conſtitutes the ſcrofulous habit, of which the principal ſymptoms ſeem referrible to a rupture of the ſmaller ſeries of veſſels either circulatory or lymphatic, and the conſequent effuſion either of red blood or colourleſs fluids, occaſioning ſometimes hæmorrhages, but more frequently interſtitial or glandular depoſits. The fine ſkin and ſilky hair obſervable in ſuch habits are farther in proof of this.

" As far as my reading goes, I have not met with any morbid affection of the liver ſimilar to that above deſcribed, or have I ever ſeen or heard of ſuch a caſe, which has made me think that it might deſerve a place in ſome regiſter of facts. It has indeed been alleged, that there is not much utility in recording extraordinary and anomalous caſes, as they are ſeldom the objects of practice. But if there is any juſtice in this remark, it applies rather to unuſual combinations of ſymptoms, than to morbid appearances detected by diſſection; for as the number of bodies that are inſpected is comparatively ſmall, there is reaſon to preſume, that, in the numberleſs others which are not examined, there may be many among them ſimilarly affected."

The

The third paper contains an elaborate

Account of the Croup, as it appeared in the Town and Neighbourhood of Chesham, in Buckinghamshire, in the Years 1793 *and* 1794. By HENRY RUMSEY, Surgeon at Chesham.

IN this account the author sees reason for admitting the existence of *spasmodic* croup as well as inflammatory; and he says,

" It appears to me that the croup is an inflammation of its own kind. If it consisted in common inflammation, we might expect to find the same appearances (that is, the same kind of concretion on the surface of the trachea) every day, as its mucous membrane is so frequently the subject of inflammation attended with an increased secretion. The matter, however, of which this substance is formed, possesses different properties from those of the mucous which is thrown out upon the membrane of the nose, or of the trachea in common catarrhal affections.

" I think it probable, that the film which we find in the croup is not formed by a secretion from the mucous glands, but is an exsudation from the exhalant arteries. Upon this principle we can more easily account for such film not being found in common catarrhal affections, in which the mucous glands are perhaps more the seat of the disease. It is, therefore, analogous to the inflammatory exsudation in the inflammation of other internal membranes first described by the late Dr. Hunter.

" The croup has been sometimes thought infectious, but I have not been able to form a decided opinion upon this point. Some circumstances render it probable, as two and sometimes three children in the same family have been seized with it. But on the other hand, I have at different times seen two or three in a family escape, while one or two of the others have died of it, without any pains being taken to keep those who were in health from the sick. When a disease is epidemic, it is sometimes difficult to determine whether it be communicated by infection, or whether several people have the disease in consequence of their being exposed to the same exciting cause. It is rather remarkable, that although there were between twenty and thirty children in our workhouse, only one had the disease."

In the treatment the author thinks that calomel, in alterative doses, as recommended by Dr. Rush, proved a useful remedy.

An Account of two Cases, shewing the Existence of the Small-Pox and the Measles in the same Person at the same Time. By P. RUSSEL, M. D. F. R. S.

" THE Measles and the Small-pox were epidemical at Aleppo, in the year 1765. They both made their appearance about the same time in December of the preceding year, and gradually increased through January, February, and part of March. The Measles disappeared in April, while the Small-Pox lingered till the summer solstice.

" Till the month of March, both diseases were, in general, of a favourable kind. The eruption in the Measles commonly happened

pened on the evening of the third, or morning of the fourth day. The eruptions were firſt viſible on the face; and began to fade every where on the ſixth or ſeventh day, but ſeldom diſappeared entirely ſooner than the tenth. They were rather more prominent than thoſe which I had obſerved in Europe, and the branny ſkurf left on the ſkin was conſiderably leſs: in other reſpects there was no material variation from Sydenham's Accurate Deſcription of the Meaſles, epidemic at London in the Year 1670.

" After the beginning of March, the diſeaſe became more formidable. The eyes were more inflamed, the coryza, the cough, and the febrile ſymptoms were in a greater degree than in the former months. The eruption appeared irregularly from the ſecond to the ſeventh day of the fever. The eruptions often appeared on the breaſt before they were ſeen on the face; they were of a fainter colour, and the branny ſkurf was, in general, leſs. A vomiting and diarrhœa were common ſymptoms from the beginning; the latter continued throughout the diſeaſe; the former uſually ceaſed as ſoon as the eruption was complete: but very young ſubjects continued to be harraſſed by retchings, excited by the irritation of ſneezing or coughing. — About the height of the diſeaſe, the ſick were ſubject to ſhort exacerbations of the fever, accompanied with difficulty of breathing, and ſtitches in the cheſt, which recurred ſeveral times in the twenty-four hours. On the whole, the Meaſles, after the month of February, approached nearer to the anomalous ſpecies deſcribed by Sydenham under the year 1674.

" From the end of February, the Small-pox, which hitherto had been of a mild diſtinct kind, became irregular and much more fatal. The puſtules were confluent on the face; on other parts diſtinct, but generally flattiſh, and indented at the top. In many caſes they ſuppurated imperfectly; in others, they remained dry or huſky: and ſome inſtances occurred of their turning black about the ſeventh day. A diarrhœa and teneſmus frequently attended from the beginning to the end.

" Though a large proportion of the infected ſtill recovered, they continued long in a ſickly ſtate. Children were not only reduced by the diarrhœa, but were often attacked with the hooping-cough, or with erratic fevers, both being at that time epidemic in the city. In the more malignant kind of Small-pox, many died between the ſeventh and ninth day; ſome ſtruggled to the eleventh; very few recovered.

" When the Small-pox and the Meaſles prevailed in the ſame ſeaſon, many of the children ſuffered both diſeaſes in ſucceſſion, as uſual. The Meaſles were rarely obſerved to ſucceed the Small-pox in leſs than twenty days, reckoning from the eruption. The Small-pox commonly ſucceeded the Meaſles ſomewhat earlier in the third week; but ſeveral caſes were met with, in which the puſtules of the Small-pox were diſcovered on the face, before the total diſappearance of the Meaſles on the limbs; that is, on the eleventh or twelfth day.

" It

" It has already been remarked, that few of the infected in either diſeaſe died before the month of March. But from that time the mortality in the Small-Pox was conſiderable; as thoſe who had juſt before ſuffered from the Meaſles, and were reduced by the diarrhœa to a ſtate unfavourable for the reception of a fatiguing diſtemper, generally periſhed; unleſs the ſupervening Small-pox was of a mild kind. The danger appeared to be rather leſs where a bad kind of Meaſles ſucceeded the Small-pox.

" The reciprocal influence of the two diſeaſes in the ſame ſubject was carefully attended to in above three hundred caſes; and ſo little did the quality of the firſt diſeaſe ſeem to influence that of the ſecond, that a mild, diſtinct Small-pox was often obſerved to follow the worſt kind of Meaſles, and vice verſa.

" In the month of March, an inſtance occurred where both diſeaſes were conjoined in the ſame patient. The ſubject was a female child two years old, of a pale, delicate complexion. The redneſs of the eyes, the coryza, and the cough which accompanied the fever, led me to expect the Meaſles. On the fourth day, the eruptions of the Meaſles were viſible on the face, the neck, and the back; but at the ſame time a few eruptions of a different kind were interſperſed on the face and neck, which, if they had been the ſole eruption, I ſhould without heſitation have declared to be the Small-pox. The progreſs of the puſtules on the fifth proved them to be variolous. Both eruptions were of a favourable kind, and diſtinctly purſued their regular courſe. On the eighth day, the Meaſles were fading faſt, while the variolous puſtules on the face were near their height. The puſtules were not numerous, were very diſtinct, and ripened perfectly. The cough continued to be a troubleſome ſymptom, eſpecially in the ſecond week. A diarrhœa ſupervened about the fourteenth day, and contributed to render the child's recovery very ſlow.

" In the month of April I met with a ſimilar caſe. A healthy boy, three years old, was attacked with the uſual ſymptoms of the eruptive fevers, at that time epidemical. The cough rather ſeemed to indicate the Meaſles. On the third day, the eruptions of the Small-pox and Meaſles made their appearance together. The variolous puſtules were of the ſmall, round kind, and came to perfect maturity; but were more numerous than in the former caſe. The Meaſles were of a fainter colour, and left behind them ſtill leſs of the branny ſkurf, agreeing in both circumſtances with the diſeaſe then prevalent.

" On the ſixth day of the fever, a diarrhœa and teneſmus were joined to the haraſſing cough, and reduced the patient ſo low in the ſecond week, that his life was deſpaired of. The flux, however, leaving him towards the end of the month, he recovered."

An Addreſs to the Public on the Advantages of Vaccine Inoculation: with the Objections to it refuted. By HENRY JENNER, Surgeon, F. L. S. &c. 4to. pp. 20; London, Cadell and Davies.

THE author commences his *addreſs* by ſtating, " in the way of compariſon,

compariſon, the peculiar differences which mark the Small-pox and Cow-pox;" and he affirms that the ſtatement is "in every particular, confirmed by very extenſive experience."

After the compariſon of the advantages which are to be derived from the ſubſtitution of the Vaccine Diſeaſe for the Small-pox, the author obſerves, "It is perfectly conſiſtent with my preſent deſign, briefly to notice the moſt popular objections which have been urged againſt the introduction of Cow-pox.

"It has been called a beſtial humour, and by a fallacious aſſociation of ideas, it is ſuppoſed to introduce an *unnatural* diſeaſe into the conſtitution.

"If this very weak and futile objection were worthy of reply, we might obſerve, that the cow is of all others the moſt healthy and the moſt cleanly of our domeſtic animals, and might alſo remark, that no females are ſo healthy as our dairy maids, whoſe morning and evening hours are ſpent amongſt the cows; and we ſhould not forget that eminent phyſicians recommend invalids to avail themſelves of the ſalubrious effects of the breath of the heifer. How void of foundation then muſt be the objection to the inſertion of an atom of matter taken from the teat of the cow, once in the life only, when every perſon is in the daily habit of introducing into his ſtomach various parts of the ſame animal. The human ſtomach revolts not at beef, butter, cheeſe, and cream; yet every one, acquainted with the animal economy, muſt know, that theſe aliments are quickly mingled with the conſtitution.

"Another grand objection (which indeed is the only one that ſtrikes at the *foundation* of our theory) is, that perſons are liable to be affected with ſmall-pox after having been inoculated with the Cow-pox.

"A very extenſive practice, and an equally extenſive communication of the experience of medical friends of the firſt reputation, would almoſt warrant a ſhort, abrupt anſwer to this queſtion; an anſwer conveyed in terms unaccommodated to the feelings of the preſent age. After this objection, which has been refuted as often as it has been urged, a laconic reply, conveyed in no polite language, would by no means be improper, as it would harmonize with the general mode of ſuch objections; and by all laws, the anſwer ought to be of the colour of the queſtion; but what is not owing to cavilling individuals, is a juſt debt due to a candid and judicious public.

"Every caſe that has been brought forward to undermine the theory we defend, we can prove to a demonſtration was not one of the *genuine* kind. There are *three* diſeaſes which have indiſcriminately been termed Cow-pox, only *one* of which is the real preventive of ſmall-pox. In the ſpring ſeaſon particularly, cows are frequently ſent to market for ſale: the farmer omits to milk them in the morning, previous to their ſetting out, that their udders may appear full, and the animals on that account become more valuable. The frequent conſequence is, that inflammation enſues, which terminates in eruptions on the teats and udder, and affects the

the milker with a loathsome disease on the hands, arms, and shoulders. The forehead sometimes does not escape, from the circumstance of the servant's leaning against the udder in milking. This disease may affect the same person several times, but it will *never* prove a preventive for Small-pox: a case of this kind occurs in the city of Bristol; a Mr. Jacobs, attorney at law, was extensively affected *twice* with this disease (which, from his total ignorance of *real* Cow-pox, he has called by that name,) but it did not prevent his being afflicted with a subsequent severe Small-pox.

Systeme Methodique de Nomenclature, &c.—A Methodical System of Nomenclature and Classification of the Muscles of the Human Body, with Descriptive Tables, shewing their Old and New Names, Situations, Attachments, Direction, Composition, Figure, Connexion, and their Uses: To which is added, a Dictionary, containing the Synonyms of the Muscles. By C. L. Dumas, Professor of Anatomy and Physiology, &c. &c. *Montpelier.* 4to. 200 pp.

It is almost universally allowed that the anatomical terms which are at present in general use, are very imperfect, and by no means correspond with the numerous and useful discoveries in this science; an attempt to correct these defects will not now be considered so daring an innovation as it might have been formerly. Mons. Dumas, as professor of anatomy, was constantly remarking the difficulty of teaching this science from the crowd of absurd names given to various parts; and has undertaken in this work, the very arduous and useful task of rectifying them; and though he may not have fully answered our expectations, yet we think a translation of this work, with some alterations that would occur on a careful perusal, would be a very acceptable present to the students of anatomy of this country.

In the third chapter, the author considers some of the defects of anatomical language in general, and the mode of correcting it; and we translate the following as a specimen of his manner of treating the subject.

" A slight examination of the most common anatomical terms will be sufficient to shew the incorrectness and impropriety of a great number of them. There are some which are strictly arbitrary, and others which have no determined signification, and which any anatomist may change at pleasure. Under this class may be ranged all those denominations drawn from numerical orders, &c. which express neither situation, form, figure, nor connexion, but only the number of parts, which does not define any thing *anatomically*. Of course, we reject the names of first, second, and third phalanx, &c. terms given to bones which have no agreement or relative size. *Vesalius's* terms of first, second, third, fourth, fifth, sixth, &c. muscles of the arm; *Columbus's* first, second, and third muscles of the *triceps*; *Winslow's* first, second, and third *adductors* of the thigh;

and first and second *external radial*; and *similar* names given to muscles which differ in situation, attachment, and figure, must at once appear ridiculous.

"If anatomical terms have sometimes a vague and arbitrary signification, there are several that have no meaning at all. What sense can be annexed to *blind hole, ossa innominata, accessary muscle, sublime muscle, humble muscle, profound muscle, pudendal artery, &c. &c. Turks saddle, par vagum, recurrent nerve, nates, testes & vulva cerebri?* How is it possible to associate such ridiculous expressions with any true and clear ideas of anatomy?

"There are other names perhaps less absurd, although not more regular, which actually tell us what they do not mean—such are the names of *vena cava*, which is not the only vein that is hollow, and *ductus arteriosus* to distinguish a duct, which is actually ligamentous in the adult.—*Arbor vitæ*, to characterize the ramifications which the internal surface of the *cerebellum* presents when cut vertically, and in which nature has not exclusively placed the seat of life, &c.

"The frequent use of terms in an absolute sense, which are only relative, is an essential defect in anatomical language. The adjectives, *great, little, vast, thin, superior, inferior, short, long, right, left*, are examples of this impropriety. When we talk of the *great* and *little* wings of the sphenoid bone, the *great* and *little* condyles of the humerus, the *great* and *little* trochanters of the thigh, the *great* and *little* angle of the eye, and the *great* and *little* bones of the tarsus, it is impossible to comprehend them. The epithets of *great* bone, *grand* artery, *great* and *little* saphena, *great* and *little* sympathetic, *great* and *little* meseraic, can never be consonant to a proper nomenclature, and ought to be abolished, since great, little, long, short, &c. are not essential properties, but only qualities relative to a part, and can only serve in the description of one part."

It would occupy more room than we can possibly allow in our Journal to follow the author in his censures on all the absurd names that are in general use, as well as the idle vanity of denominating parts after the discoverers of them; who, the author justly observes, have no occasion for such auxiliaries to render their names immortal; not to mention the possibility of attributing a discovery to one person, when it actually belongs to another.

The author's plan is to divide the human body into forty-seven different regions, all of which have particular names, and under which all the muscles may be ranged in a natural order, and immediately found as indicated by their proper heads and classes; and he thinks this method will facilitate both the study and investigation of anatomy, by assembling together what ought to be united, and separating what ought to be divided, as putting each muscle in its proper place, and circumscribing its limits; and, although he says the same idea has been adopted by *Chaussier*, he thinks his own an improvement upon it.

To

To illuſtrate his mode, the author has given us tables of the muſcles, arranged under diſtinct columns according to their regions, with their old and new names, ſituation, firſt attachments, fixed points, direction, laſt attachments, points of inſertion, compoſition and figure, connexion, and uſes. And at the end of the work he has added an uſeful dictionary of ſynonyms of all the muſcles of the human body from the beſt authors.

Nordiſhes Archiv. i. e. Northern Archives of Natural and Medical Science; or, Magazine for Medical and Natural Science of the North. Edited by Prof. PFAFF, of Kiel, and Dr. SCHEEL, of Copenhagen. Firſt Volume, firſt Number, 1799. pp. 192, 8vo. Price 16 gr. or about 2s. 6d. Copenhagen, Brummer.

THE Editors of this new periodical publication propoſe to collect all contributions relating to natural and medical ſcience, by which both are, as well in general as in their ſingle parts, illuſtrated, enlarged, and corrected, and the practical application of them, for the preſervation of health, and cure of diſeaſes, really improved; but merely as far as this is owing to the induſtry and genius of northern (Swediſh and Daniſh, &c.) phyſicians, ſurgeons, and naturaliſts. We ſhall be enabled, by this uſeful publication, to get acquainted with the ſtate and progreſs of medicine in the North, of which we have had hitherto but little knowledge; and the well known talents of the Editors, and the intereſting contents of the firſt number, give us reaſon to hope, that this undertaking will anſwer their views, and ſatisfy the expectations of the learned. We find here, amongſt the *Original Papers*, 1. *New Experiments on Reſpiration and its uſe, by Prof. Abilgaard, with Remarks of Prof. Pfaff.*—Theſe experiments are directly oppoſite to the generally adopted doctrine of reſpiration, and Mr. Abilgaard attempts nothing leſs than to prove by them, that very little air, or none at all, enters into the lungs during inſpiration; againſt which Prof. Pfaff defends in his remarks the general opinion. 2. *Diſſection of a drowned horſe, by J. Kuhn, with ſome phyſiological remarks of Mr. Herholdt and Rafn.*—The object of this paper is chiefly concerning the air bladders that are found in large drowned animals. 3. *Experiments on Galvaniſm*, are contributions to Mr. Humboldt's work on the ſame ſubject. 4. *Contributions to the hiſtory of larvated and contagious intermittent fevers*, contain ſome intereſting obſervations. 5. *On Small-pox Inoculation, by Prof. Pfaff*, where he relates ſome obſervations made in inoculating a great number of children in ſeveral villages at once. 6. *Deſcription of a hooked forceps, and a perforator, with a ſheath, by Dr. Scheel.*— *Short reports and extracts from letters*, include a ſhort account of the mineral waters of Sweden, by Hedin, &c. *Literature of Northern Medicine and Natural Hiſtory*, A review of ſome diſſertations of Kiel and Copenhagen, and of ſeveral pamphlets relating a dyſentery prevailing in the neighbourhood of Kiel.

Encyclopedie, i. e. Encyclopedia of the whole Chemiſtry, compoſed by F. HILDEBRANDT Prof. at Erlangen. Firſt Vol. Theory. Firſt Number, 1799. pp. 219. Price 14 gr. or about 2s. Erlangen, Walther.

WE cannot but approve the excellent plan which the author has adopted here, in propoſing the elements of chemiſtry; and we are fully convinced that it is perfectly calculated to ſatisfy the requiſites which the vaſt progreſs of that ſcience entitles us to expect from a Philoſophical Syſtem of Chemiſtry. Mr. Hildebrandt intends to include the whole chemiſtry in a ſyſtematical, and, as far as poſſible, in a mathematical order; with ſuch a combination of theory and practice, that it may prove a very uſeful manual, not only for the philoſophic and profeſſional chemiſt, but alſo for a common reader, and for the uſe of life. With reſpect to this, the preſent work is to comprehend as well all parts of applicated as of pure chemiſtry, to the former of which a proper ſection is to be devoted. The theoretical part is to precede, to which the practical will follow, in ſuch a manner that its rules may be derived from the theory, and the reſults in the different operations explained by it. The whole is written with as much conciſeneſs as poſſible, and the paragraphs are therefore but aphoriſtic, and the quotations but few.

How far, however, the author has fulfilled this difficult and intricate taſk, which he has planned to execute, we ſhall not be able to judge till more numbers have made their appearance. In the preſent number we find, according to the plan, the theory of the different elements in general, of heat, light, oxygen, azote, atmoſpheric air, of hydrogen, and of water.

J. Van Heckeren, M. D. de Osteo genesi præternaturali, cum Tabula aenea; 4to. pp. 125. Lugduni, Batavor. 1797. Price 2 rixd. 6 gr. or about 8s.

THE Author of this learned Diſſertation treats, firſt, of the morbific oſſification which takes place in the preternatural ſwelling of the bones themſelves, and afterwards of the oſſification in the cartilage, in the membranes, and other ſoft parts of the body. From his inquiries and ſtrict obſervations of the proceſs which Nature follows in forming ſuch bony ſubſtances, it appears, Naturam in oſteogeneſi præternaturali, habita partium, quibus contingit ratione non minus ac in aliis aberrationibus *conſtantes* ſequi leges atque *vertum* in agendi modo ordinem ſemper ſervare.

In the accurate explanation of theſe laws the Author ſhows with much acuteneſs, how conſtant they really are, notwithſtanding the appearance of irregularity with which the morbid accumulation of bony matter ſeems to iſſue; and it appears that Nature acts here, likewiſe, according to eſtabliſhed organic regulations; and thus, what has been otherwiſe called a concrementum inorganicum, ought properly to be conſidered as a regular production of Nature. The Author then proceeds to diſcuſs, copiouſly, upon the exuberance of callus; and having examined the late opinions of the non-exiſtence of callus, he gives his own opinion, which he illuſtrates by

by a very good figure of a morbific bone. His definition of the callus luxurians is the following: "Callus luxurians vocatur, qui majora copia formatus est, quam ad deperditam non solum ossis substantiam restaurandum sed etiam ad debitam sanitati convenientem firmitatem toti ossi tribuendam requirebatur." In accurately surveying a bone, where luxuriant callus has been formed, it is apparent that plastic Nature never performing any thing superfluous, does not produce an exuberance and deformity of callus from mere luxuriance, but that it is always occasioned by certain external and internal causes, by which the formative act of Nature is disturbed and rendered irregular; how they act and influence upon the formation of the callus is amply explained by the Author.

Critical Survey of the Latest Theories on difficult Dentition in Children.
(Partly extracted from the Journal of Invention, Theories, &c. in German. Numb. XXXI. 1800.)

DENTITION has been always considered as a matter of great importance in diseases of children, and all the different and sometimes dangerous affections incident to the infantile age at the time they are cutting their teeth, have hitherto been supposed by almost every practitioner to originate from the irritation of the gums by teeth breaking through; and the appellation of *dentitio difficilis* comprehends a series of symptoms, that, however they may differ in their external appearance, are derived from the same source. A swelling and inflammation of the gums, with a great salivation and violent pain, and even spontaneous hydrophobia, a collection of pituitous matter in the breast, a laborious breathing, coughs, or continual vomition of bilious matter, vehement diarrhœas, convulsions, and other spasmodic affections; fevers with acute exanthemata, a suppression, or a superabundant excretion of urine, or a preternatural sharpness of it; an inflammation of the urethra and prepuce, with a kind of gonorrhœa; all these are mentioned by medical writers as immediate symptoms of teething, however increased and changed by other concomitant causes, as colds, small pox, worms, &c.

Such was the prevailing opinion of dentition, and the symptoms that sometimes attend it, till of late it has been made a matter of inquiry and discussion. Three of the most respectable authors and physicians of Germany, finding great difficulties in explaining those symptoms according to the opinion which was generally adopted, made an attempt to establish new theories on dentition, by which also the practice in those affections is greatly influenced Although they agree, that the mere irritation of the gingiva cannot be allowed to be the immediate cause of those symptoms, yet they differ very much in the explanation and theory they respectively give of their nature and origin.

It is certainly undeniable that the idea of difficult dentition has been too far extended; but whether, on the other side, it ought to be considered of no immediate influence at all, is still a matter of dispute, as will appear from the observations annexed. It is proper

now,

now, however, to proceed to give a conciſe account of each theory; of which we ſhall firſt relate,

I. *Dr. Hecker's Theory*, (contained in his Magazine for Pathological Anatomy and Phyſiology. Numb. I.)

The common opinion of the act of teething in children is ſubject to ſome difficulties, as it cannot be well explained, how it is poſſible a part, as the gums, not poſſeſſed of much ſenſibility and irritability, only by being irritated from the teeth cutting through, ſhould produce ſuch violent ſymptoms, as are obſerved ſometimes during the period of firſt dentition. Another cauſe ought, therefore, to be ſought for, that will prove more ſatisfactory in explaining, and more uſeful in directing a proper practice and cure of thoſe ſymptoms, to which ſo many children fall a ſacrifice.

It is a general law founded upon facts and experience, that as ſoon as the organs of ſecretion are diſeaſed or affected in a morbid manner, they ſecern ſuch humours as are alſo morbid and preternatural. Thus, an irritation of the liver will produce a ſharp and corrupted gall; paſſions often render the milk venomous; and the mildeſt ſaliva of an irritated and angry animal becomes very malignant and poiſonous. Now, in a child that is cutting teeth, many circumſtances take place, which are ſufficient to turn the ſaliva into a very powerful, malignant, and even deadly poiſon. We obſerve a great collection of ſaliva and an irritation in the mouth of a teething child; it ſuffers a great deal of pain; reſtleſs and ſleepleſs, it is continually crying, irritated, and in a degree of paſſion. This, already, may lead us to conjecture, that the ſaliva acquires ſuch a malignity as to be able to cauſe many and very dangerous ſymptoms of difficult dentition.

It will, however, be ſtill further proved by the following arguments: That *a corruption and acrimony of the ſaliva, almoſt ſimilar to that in the canine madneſs, is the principal cauſe from which all the moſt dangerous ſymptoms of dentition are to be derived.*

1. Many ſymptoms of dentition admit of a more natural and eaſier explanation from this ſaliva than from the irritation only, viz. the coughs, laborious breathing, the collection of pituitous matter in the breaſt, ſuffocation, &c.; ſwallowing it cauſes vomition and diarrhœa. When it poſſeſſes a high degree of acrimony, or when its excretion is by any means obſtructed, it produces inſenſible and irritable conſtitutions, hydrophobia, locked jaw, epileptic fits, &c. The acrimony being imparted to the humours, gives riſe to fevers and exanthemata. The inflammatory and gonorrhoic affections of the genitals are owing to acrid ſaliva having thrown itſelf upon the urinary ſyſtem; a complication of dyſentery and dentition is conſequently very dangerous, becauſe the bowels are thus likely to be doubly affected.

2. Dentition has been obſerved to be ſlight and eaſy whenever the ſalivation was conſiderable, or ſalival humours evacuated by other emunctories of the body.

3. There is a great ſimilarity between the ſymptoms of difficult dentition

dentition and thoſe of real hydrophobia, apparent from the impediment in ſwallowing, and other ſpaſmodic affections.

4. Several children, who died of difficult dentition, had bloody ſtools, attended with a teneſmus, as in dyſentery. Upon diſſecting the body, eroſions and inflammations were found in the throat, ſtomach, and inteſtines, which were moſt probably cauſed by the acrid ſaliva; ſomething ſimilar has been noticed in the ſtomach of perſons who have died of hydrophobia.

5. The cure conſiſts in diminiſhing the irritation in the mouth, in removing the inflammation of the gums, of the ſalival glands, and the tonſils. To evacuate the ſharp ſaliva, and to render it leſs noxious, are indications to which we are led by Nature itſelf. The moſt difficult dentition becomes leſs dangerous when there is much ſalivation, vomition, and moderate diarrhœa.

The principal remedy is *the fixed cauſtic alkali*, or *the volatile alkali*, which has been already recommended by Fred. Hoffmann. When this is given early enough, before the nervous ſyſtem is too much affected, or before too vehement ſpaſmodic or even apopletic ſymptoms have ariſen, it certainly is able to ſave the life of many children. It moreover, in general, is a very uſeful remedy, whenever the organs for the ſecretion of lymphatic humours being irritated and inflamed, ſecern morbific fluidities; for inſtance, in gonorrhœa, in ſome caſes of dyſentery, catarrhous inflammations of the throat and breaſt, hydrophobia, &c. Bliſters applied behind the ears are of great ſervice. *The inciſion of the gums* can only ſerve to mitigate the violent inflammation, but does by no means promote the cutting of the teeth. *Opium* ſhould be avoided, or uſed at leaſt with great caution, as apoplectical fits, of which many children die in dentition, are frequently brought on by it. *Extractum hyosciami* may be given inſtead of it; *warm baths* have likewiſe great effect in removing the ſpaſms and pains, and in promoting ſalutary excretions. *Emetics* and *cathartics* are alſo ſometimes very uſeful.

II. *Dr. Brandis's Theory.*

The intelligent Dr. Brandis, of Brunſwick, known by ſeveral excellent publications, and Tranſlator of Darwin's Zoonomia, advances his opinion about the nature and origin of the dangerous ſymptoms ſometimes obſervable at the time of firſt dentition, in his book *on Metaſtases*, 1798, in German. Although he agrees with Armſtrong and Hecker, that they are not to be derived only from the irritation of the nerves of the teeth, yet he rejects their theories, and rather thinks, that *a ſuppreſſion of ſalival ſecretion* has the principal ſhare in producing thoſe ſymptoms. The ſecretion of ſaliva is much increaſed by the topical irritation in the mouth, and becomes very neceſſary to the conſtitution of the child. When the topical irritation is too vehement, in a difficult dentition, it extends to the ſalival glands, and cauſes a ſuppreſſion of the ſecretion of ſaliva. It may be obſerved, therefore, that the mouth and lips become dry and cold, in bad caſes; meanwhile, there is a great degree

degree of febrile heat in other parts of the body, which is a diagnoſtic ſign of this dangerous diſeaſe.

When the ſuppreſſed action of the ſalival glands is replaced by that of the pancreas, a diarrhœa comes on, which, as it generally continues as long as the difficult dentition is accompanied by thoſe ſymptoms, contributes very much to diminiſh the violence of them, and of the concomitant fever. But, on the contrary, when this does not take place, nervous ſymptoms, convulſions, and a nervous fever ariſe, which having a great ſimilarity with Hydrocephalus Internus, is very well deſcribed by Armſtrong under the name of hectic fever. That theſe nervous ſymptoms cannot be aſcribed to the nervous irritation ariſing from the teeth cutting through, may be farther proved by the following conſiderations:

1. Nervous ſymptoms, ariſing from a re-action of the ſenſorium cauſed by the pain, are never removed by any material excretion, as this manifeſtly happens in difficult dentition by ſalivation and a diarrhœa of watery humours.

2. All anodynes and antiſpaſmodic remedies, opiates particularly, which in convulſions proceeding from pain, prove ſo very efficacious, are without any avail here, of which circumſtance Dr. B. had frequent experience.

3. The inciſion of the gums ought to remove the cauſes of the diſeaſe at once, according to the theory generally believed; but in four caſes, where he ſaw it uſed, it was not only of no immediate utility, but in ſome inſtances, by additional irritation, it increaſed the nervous ſymptoms. A healthy child, fifteen months old, having ſuffered a ſlight degree of cold, was ſuddenly ſeized with all the ſymptoms of difficult dentition. Emetics, mercurial purgatives, fomentations of the mouth, &c. were applied in vain. It lay ſenſeleſs, with its mouth open, and cold; the pulſe was hardly perceptible, and vehement convulſions came on from time to time. The gums were cut in on both ſides to the teeth themſelves, after which it ſeemingly recovered a little; but ſoon after, the mouth and the lips remaining dry, pale, and the cheeks cold, the fever and convulſions returned; and though the operation was repeated, and ointments rubbed in, outſide and inſide, it died the next day. The gums were found divided by the operation, and the teeth free and viſible, but no inflammation could be traced on the margin of the inciſed gums. The operation ſhould have certainly ſaved the child, if the diſeaſe had been dependent from the cutting of the teeth, and a ſalivation would have had that effect.

In examining thoſe theories, the arguments ſhould firſt be conſidered, by which they have attempted to prove that the ſymptoms derived from difficult dentition are not owing to the irritation of the gums, on account of their being leſs ſenſible, and not provided with nerves, as to be able to cauſe thoſe ſymptoms; that the inciſion of the gums is of no utility, and, conſequently, that the nature of the ſymptoms themſelves is by no means correſpondent with the quality of the cauſe they are ſuppoſed to be occaſioned by. Although the theories juſt propoſed are partly grounded upon thoſe

conſiderations,

conſiderations, yet it may be proper to defer reviewing them till we relate Dr. Wichmann's Theory, as it is particularly urged by that gentleman.

Both Theories are certainly very ingenious and plauſible, ſeveral doubts, however, may be raiſed againſt them, to which they ſeem to be expoſed. In the firſt place, Dr. Brandis objects to Dr. Hecker's opinion, that, as the ſymptoms of difficult dentition do not ariſe before the ſalivation is entirely ſuppreſſed, and conſequently before the ſecretion of any ſaliva is ſtopped, they cannot owe their origin to its acrimony, of which quality he never could perceive any ſigns in a teething child. But ſhould not the exiſtence and action of ſuch an acrid humour be proved by the eroſions and inflammations that have been found in the throat, ſtomach, and inteſtines of children dying in a high degree of difficult dentition? However, even when this is allowed, it may be ſuggeſted, that it would be more proper, and agree better with our improved knowledge of animal œconomy, to derive primarily the morbific ſecretion of the ſaliva, and the ſymptoms of difficult dentition, from the ſame proximate cauſe which conſiſts in the nervous irritation, and to conſider both as the congenial effect of it, and not the morbific ſaliva as the original cauſe of thoſe ſymptoms. It is moreover obvious to remark, in general, that the idea of an acrimony wandering through the body, and cauſing diſeaſes, is by no means evident, but built upon hypothetical principles.

The opinion of Dr. Brandis is founded upon his theory of metaſtaſes, which he has propoſed in the work above mentioned. According to this, the idea of a metaſtaſis ought to be thus conceived: "When certain actions in any organ, or ſyſtem of organs, ceaſe, or are by any means diminiſhed, they muſt be replaced by another action in another organ or ſyſtem of organs of the body, dependent from the former action. The firſt may be called the *original*; the ſecond, the *vicegerent action*." In dentition, now, the ſecretion of ſaliva is the original action of the ſalival ſyſtem, cauſed by the topical irritation in the mouth, which in a teething child is become neceſſary to its conſtitution. If that action happens to be ſtopped, a vicegerent action is excited in another organ; and if this takes place in the nervous ſyſtem, all thoſe dangerous ſymptoms appear which are to be attributed to difficult dentition. It is, however, not requiſite, and would lead us too far, to enter into the particulars of this ingenious theory; it may ſuffice to obſerve, that the ſuppreſſion of ſalival ſecretion might be more naturally conſidered as the effect of nervous irritation, which by its violence, at the ſame time produces the other ſymptoms of difficult dentition. This explanation is ſuitable to a known law of the animal œconomy, according to which, ſecretions are increaſed by a moderate degree of irritation, and ſuppreſſed whenever it becomes too vehement. When ſalivation, therefore, is not ſuppreſſed, but rather increaſed, and the ſymptoms without danger, the irritation of the nervous ſyſtem is moderate, which being relatively vehement, muſt be looked upon as the common cauſe of both,

the suppression of saliva as well as of the violence of the symptoms. Salivation, however, may be of some service in dentition, by rendering the gums tender, and more easily to be cut through.

Anodynes and narcotics, whose efficacy is denied here by Dr. B. have generally been found to be very useful by other eminent practitioners; and even Dr. Hecker recommends the Extractum Hyosciami, though he ventures not to give opiates, which, however, in some instances, may prove likewise very useful.

[To be continued.]

Almanach oder Taschenbuch; i. e. *Almanack or Pocket-Book, for Chemists and Apothecaries, for the Year* 1800. Weimar. 8vo. Price 16 gr. or about 2s. 6d.

The Editor of this useful publication, which for many years has maintained its credit with the public, is Professor Göttling, of Jena, whose great merits in chemistry are well known, and justly respected. It consists of a common Almanack, where, instead of the saints, the names of celebrated chemists are inserted; to which is added an account of those pharmaceutical operations that are to be performed in each month. The present volume gives a continuation of the revisal of operations and experiments begun in the Almanack of last year, for the purpose of accommodating the foregoing volumes to the present state of chemistry; some new experiments of the author are likewise subjoined. The present Almanack reviews those of 1782—85. The whole is concluded with accurate reviews of new chemical and pharmaceutical publications.

MEDICAL

MEDICAL AND PHYSICAL INTELLIGENCE.

Dr. Knebel's Method of Curing the Ague.—This method is related in his Materials for Medical Science, Vol. I. Part II. and is principally founded on Brunonian principles, or rather on the ſyſtem of medicine, named in German, the Syſtem or Theory of Incitation; (Erregung's Theorie) which, though built upon Brown's ſyſtem, differs from it in ſome points. According to this theory, opium is the chief remedy in intermitting fevers; but Dr. Knebel's method of giving it, is ſo peculiar, that we think proper to mention it. He only adminiſters opium to check the paroxyſm; during the intermiſſion, he gives other excitant medicines, as liquor anodyn. min. Hoffm. eſſence or tincture of valerian, cinamon, &c. with a full diet of meat, wine, &c. In caſes where a kind of ſthenic ſtate is brought on by the uſe of fixed excitantia, bark, &c. opium and other excitants muſt be given with caution, or changed for a few days with gentle ſalts, tartarus tartariſatus, tartar emetic in ſmall doſes, bitters, elixir acid, Haller, &c. Opium, as the univerſal medicine in the paroxyſms, is given in a doſe from two to four grains, which are divided into three parts; the firſt of which is to be taken two hours and a half before the fever comes on, the ſecond about an hour after the firſt, and the laſt not quite half an hour before the paroxyſm commences. The powder of opium is preferable to any other preparation of it; during the paroxyſm, he allows his patients wine and water, or beer; but if the heat is too great, water only. Should opium cauſe too great a ſtupifaction, it may be taken in coffee. When the paroxyſms are repreſſed, it is, however, adviſable to continue the opium for five or ſix times in the ſame manner.

Profeſſor Blumenbach has preſented to the Royal Society at Gottingen, ſome phyſiological remarks on a curious animal, which has been lately diſcovered in New South Wales, and brought to England, from whence a ſpecimen was ſent him by Sir Joſeph Banks. This animal, deſcribed already by Dr. Shaw, under the name of *Platypus*, has the ſhape of a ſmall otter, and the beak of a duck. It may certainly be conſidered as an argument in ſupport of the ſcale of nature, if this was an object ſo much deſerving attention as it is thought by ſome. The beak of this animal has alſo a great likeneſs in its internal ſtructure with that of a duck, it being likewiſe provided with a large bundle of nerves from the fifth pair, for the purpoſe of increaſing the ſenſe of feeling ſo neceſſary to them in the ſearch of their nouriſhment. Nevertheleſs, it differs in an other thing from a bird's beak by having intermaxillar bones, (oſſa

 intermaxillaria)

intermaxillaria) a curious instance that Nature follows in the formation of certain animals some certain laws, even when this is in other respects very anomalous. Dr. Blumenbach calls this animal Ornithorhynchus Paradoxus. *(Goetting Gelehrt Anzeigen*, 1800, No. 62.)

Cit. Sedillot the younger, recommends the acetous ether as a gentle anodyne, internally taken; externally applied, it is a powerful dissolvent without augmenting an inflammation. It produces a gentle warmth on the skin, and a salutary perspiration, and is used with effect in rheumatic paroxysm and gout. He obtains this ether by distilling equal parts of vinegar and alkohol, and by clearing it from the superfluous acid by the carbonate of potass. — *(Hufeland's Newest Annals of his French Medicine.)*

Professor Tromsdorf at Erfurt, has discovered a new earth in a fossil, commonly called the Saxon beryll, which is found in the mines of the electorate of Saxony. This earth possesses the following properties. It is of a white colour, and not soluble in water; in a fresh state, moistened with water, it acquires a degree of expansibility; and in fire it becomes so hard as to scratch glass. It is dissolved with ease in acids, and composes different salts with them. Fixed and volatile alkalies have no effect upon it, neither in the humid nor dry way. It has the most relation with oxalic acids. The Professor calls this new earth Agust-Earth, on account of its having no taste in all the combinations with acids, by which it materially differs from the glucine. A farther account of it, and likewise a description of the fossil, is to be given in a new Number of the Journal for Pharmacy. *(Fenaer Literture Zeitung.)*

Professor Gmelin, at Gottingen, has also examined the beryll from Siberia, and nearly found the same things as Vauquelin, an account of which will be published in a short time.

The Coccinella Septempunctata has been recommended by a German dentist, as a very sure and certain remedy against toothach. It is squeezed and rubbed between the thumb and forefinger till the points of the fingers become warm. The gums of the affected tooth, and the tooth itself, are now besmeared with it, on which the pain immediately ceases. It was but in few cases necessary to apply it a second time. To preserve the sanative power of this insect, it may be kept in melted wax, suet, or in sugar.

The Russian Count Moussin Poushkin, at Petersburgh, has discovered a new method of forging Platina, totally different from any known before. He is willing to communicate his discovery to any artist, or society, who will furnish him with 150lb. of that metal; and he hopes to make it, by his method, an object of trade and manufacture. *Gilbert's Physical Journal*, 1800.

Professor

Profeſſor Hamilton, of Erfurt, attempted to ſhow, in a paper read before the Society of Sciences at Erfurt, on the nature of electric matter, that this conſiſts of light, fire, and phoſphoric acid.—*Ibid.*

The ingenious Mr. Humboldt has made ſeveral intereſting experiments, to determine the quantity of carbonic acid, or fixed air, contained in atmoſpheric air, which was before commonly calculated to be 0,06, and by Mr. Girtanner only 6,01; it was not, however, ſatisfactorily aſcertained. After numerous experiments, Mr. Humboldt found the middle proportion for the temperate zone to be 0,015; the maximum he found was 0,018, at 73° hygrom. Sauſſure 18° 5′ Reaumur; the minimum 0,05, at 17° Reaumur. Mons. de Sauſſure obſerved, even on the ſummit of Mont Blanc, carbonic acid, which probably had been evolved from ſome lichens containing carbon, as Lichen ſulphureus and rupeſtris. The quantity of carbonic acid in the air, which Citizen Garnerin brought down with him from a height of 650 toiſes, was equal to that of the air of Paris. According to theſe experiments, carbonic acid ſeems not only to be an adventitious particle of the atmoſphere, but to be every where diffuſed in it; and it is not unlikely we may find hydrogen gas and azote gas combined with it. Carbonic acid could not be traced in rain water. In ſummer, the atmoſphere is found to contain a greater quantity of carbonic acid than at any other time. The proximate cauſes of its gradual increaſe and diminution has not yet been diſcovered. *Ibid.* 1799.

The experiments of the ſame gentleman on the illumination of rotten wood, are as intereſting as curious, Carbonic gas, deprived of oxygen gas by means of phoſphor, extinguiſhes the phoſphoric light of the wood; ſome atmoſpheric air being admitted, it becomes again viſible. It does not ſhine ſtronger in oxygen gas than in common air; the abſorption of it is not conſiderable, though at laſt ſome carbonic acid is perceived. In pure azotic and hydrogen gas, the wood is immediately extinguiſhed; but as ſoon as atmoſpheric air is admitted, the luſtre is reſtored. All theſe airs were purified by phoſphor; but to ſhow that the extinction was by no means owing to the evaporated phoſphoric acid, he put the wood into atmoſpheric air impregnated with phoſphoric acid, in which it ſhone with equal ſtrength. The illumination was extinguiſhed by water, or air heated to the degree from 50 to 32° Reaumur. In cold water, however, it continues to ſhine a long time. It diſappears in alkaline ſolutions; in alkohol in 6 minutes, and in all acids in 9 or 12 minutes. But we have reaſon to ſuppoſe that Mr. Humboldt did not uſe for his experiments concentrated ſulphuric acid, becauſe this acts upon ſhining wood with the utmoſt rapidity, and blackens it, and a hydro-carbon with a great deal of hydrogen is produced. Mr. Humboldt farther obſerves, that he never could perceive the ſubterraneous wood in the mines ſhining, but only that which is expoſed to light. But this does not agree with ſome other obſervations,

obſervations, according to which, wood continually expoſed to light never emits any illumination. *Ibid. Vol. iii. No.* 1.

Prince Dimitri Gallitzin has made ſeveral experiments on the germination of ſeeds of garden creſſes, which he ſowed in different gaſes of equal temperature; and the reſults of them are the following: 1. In gas oxygen and azote, he found the ſeeds ſhoot as well as in atmoſpherical air. 2. Gas hydrogen and carbonic acid, both prepared out of different ſubſtances in different ways, ſtopt the germinating of the ſeeds without deſtroying them. They began to ſwell a little, but being during eight days left in the gas, no germ evolved itſelf; meanwhile, the ſeed in the other airs had already emitted four leaves; when atmoſpheric air was admitted, thoſe ſeeds began to produce two leaves in forty-eight hours. 3. Nitrous gas entirely deſtroyed the ſeeds, by blackening and rendering them incapable of germinating in other airs, which is probably owing to the concentrated nitrous acid contained therein. To try whether the ſprouting of potatoes in winter could be prevented by laying them into carbonic gas, he put ſixty potatoes under a bell glaſs filled with carbonic acid, the bottom of which he immerſed in quickſilver, to prevent the admiſſion of atmoſpheric air. The potatoes indeed, though left there for ſix months, did not ſhoot out, but were found in a ſtate quite rotten. *(Vid. Gilbert's Phyſical Journal.* 1800. *4th Vol. No. IV.*)

Profeſſor Gmelin, of Göttingen, relates ſeveral experiments with the *tellurium*, which he obtained out of an ore from Tranſylvania, by means of aqua regia. Theſe experiments do not quite agree with thoſe of Klaproth, on account of the metal which Gmelin analyſed being leſs pure. Its ſpecifick weight was only 4,333, and it melted as eaſily as lead; it is very volatile, and evaporates without the leaſt arſenical ſmell, and in a ſtronger heat with a blue flame. Nitric acid diſſolves it with ſome difficulty, but aqua regia with eaſe, and forms a yellow ſolution with it. It is eaſily ſoluble in lixivium, and the ſolution in aqua regia is precipitated with a green colour by lixivium ſanguinis.

In explaining the diſappearance of emphyſematous humours, it has been the general opinion, that the abſorbent veſſels had the power of reſorbing and receiving air as ſuch, or in its aëriform ſtate. To prove the truth of this, Dr. Thilow of Erfurt, made the following experiments: He thruſt a trocar into the belly of a healthy dog, and having brought through the opening a quantity of fixed air by means of a ſyringe, he ſhut it immediately with a thick plaſter: the dog's belly became very much inflated, but in one hour and a half the ſwelling was entirely gone and the dog well again. The ſame experiment was repeated with a cat: two hours after ſhe was killed, and in opening her, whole tracts of the abſorbent ſyſtem, in different parts of the body, were found full of air, which was eaſily diſtinguiſhable between the lymph. Dr. Thilow

Thilow was now convinced of the capacity of the abſorbent ſyſtem to receive the air exhaled into the cavities of the body. Perſons, therefore, whoſe digeſtive powers are in perfect and ſound ſtate, are never or very little ſubject to flatulencies, notwithſtanding they have eat victuals containing a great deal of air, which can only be accounted for by the air being received into the abſorbent ſyſtem, mixed with the blood, and exhaled through the ſkin. (*Hufeland's Journal, Vol.* ix. *No.* 2.)

Dr. Plies relates two inſtances of intermmitting fevers, where flores arnicae, in combination with bark, proved very ſucceſsful, though bark by itſelf, opiates, quaſſia, flores ſalis ammoniaci martiales, were given before without avail. The uſe of arnica in agues has been recommended a long time ago by Collin, Stoll, (Ratio Medendi, Vol. III.) Murray (Apparatus Medicamen, Vol. I. 242, ed Althoff) as a very powerful remedy, but it became of late almoſt out of uſe. Dr. Plies is of opinion, that it may be given with great ſucceſs in ſuch intermittent fevers as have more of the chronic character, where the apyrexies are longer, the froſt more laſting, and the heat leſs; and which are particularly obſervable in weak conſtitutions, and characteriſed by their long duration without the exiſtence of a material cauſe, but merely from an impreſſio nervoſa. (*Ibid.*)

Dr. Cappel, of Göttingen, recommends the mineral waters of Driburg in Weſtphalia, which are partly ſaline, partly martial, as the beſt and ſureſt preſervative and remedy againſt ſea ſcurvy. He is going to explain this farther in a pamphlet, which will be publiſhed in a ſhort time.

Mr. Lucas, apothecary at Erfurt, has found a ſure and ſimple method of making foul and putrid water again potable, and likewiſe of preſerving water for a long time from being corrupted. This diſcovery, which is particularly intereſting to ſeamen, he propoſes to publiſh for a certain douceur, by way of ſubſcription, for which he may be applied to at Erfurt.

The well known Dr. Hahnemann, now reſident at Hamburgh, pretends to have diſcovered a ſpecific remedy, which acts as a very certain preſervative againſt the ſcarlet fever. This diſcovery he is willing to make known to the publick, if he ſhould find three hundred ſubſcribers, of whom each is to pay him a louis-d'or before hand. Upon this every one of them gets a receipt, and along with it a ſmall powder, of which the remedy conſiſts, to try it before its being publiſhed, when an opportunity ſhould offer. This powder is diſſolved in two hundred and forty drops of ſpiritus vini diluted with five parts water; the turbid ſolution which is thus obtained, is a very ſtrong ſolution of the remedy. Of this, one drop is added to one hundred drops of diluted ſpiritus vini, ſhaking it for ſome minutes, which forms the middle ſolution; but this is

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ſtill too ſtrong to be given. One drop therefore of this, is again dropped into the ſaid quantity of ſpiritus vini diluted, and the mixture ſhook for ſome minutes. This is the preſervative which is given to thoſe who are not yet infected, and will certainly ſecure them from the contagion. The doſe for a child of one year old is two drops; for one of two years, three or four drops; from four to ſix years, ſeven or eight drops; for nine years, fourteen to ſixteen drops, and then with every year two drops more; however, the doſe muſt not exceed forty drops for people from twenty to thirty years old. It is repeated every 72 hours during the time the epidemic is reigning, and continued for ſix weeks after it.

A very curious inſtance of a nearly two years abſtinence from all food and drink, is related in two numbers of Hufeland's Practical Journal, Vol. VIII. and IX. No. 2; and a pamphlet has ſince been publiſhed reſpecting this fact, by Dr. Schmidtmann of Melle, in the Biſhoprick of Oſnabruck.

A country girl, ſixteen years old, in a village near Oſnabruck, had enjoyed a good ſtate of health during her childhood; but at about ten years of age, ſhe was ſeized with epileptic fits, againſt which, a number of remedies were employed in vain. Since that time ſhe was moſtly confined to her bed, particularly in Winter, but in Summer ſhe found herſelf a little better. From February 1798, her excretions by ſtool and urine began to ceaſe, though ſhe took now and then a little nouriſhment. But from the beginning of April of the ſame year, ſhe abſtained entirely from all food and drink, falling into an uninterrupted ſlumber almoſt ſenſeleſs, from which ſhe only awoke from time to time for a few hours. Her ſenſibility was during this time ſo great, that the ſlighteſt touch on any part of the body, brought on partial convulſive motions. In this ſtate ſhe had continued for nearly ten months, when Dr. Schmidtmann ſaw her firſt in March 1799. Though ſhe had not taken the leaſt nouriſhment during all this time, Dr. S. found her, to his utmoſt aſtoniſhment, freſh and blooming. For the laſt two months only, the intervals of ſleep began to be longer; her ſenſes of ſight and hearing were in perfect order; but her feeling ſhe ſeemed to have quite loſt, as ſhe could ſuffer pinching of the arms and legs without pain; her gums bled frequently, and the pulſe was ſcarcely perceptible in the arms, but beat ſtrong and full in the carotids, about 120 in a minute. Dr. S. attempted to make her drink a little milk, but ſhe proteſted ſhe could not ſwallow it. The alvine and urinary excretions had quite ceaſed.

Although there could hardly be a ſuſpicion of any kind of impoſition, the parents being honeſt people; yet, to remove all doubt, ſix ſworn men were appointed from different places in the neighbourhood to watch her day and night, and inſtructions given to them accordingly. This being continued for a fortnight, the men were diſmiſſed, having given evidence upon oath, that the patient had never taken any food or drink whatever during that time, nor had any excretion by ſtool or urine. She had been once

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very ill and nearly dying, seized with convulsions, feverish, and sometimes in a great sweat, which had the extraordinary property of turning water black. When Dr. S. saw her again, he found her quite recovered, not in the least emaciated, but rather looking lustier: her gums, however, still frequently bled, and her feeling was not yet returned; but her memory was not impaired, and she amused herself sometimes with reading and writing. No alvine and urinary excretion had taken place. Sometimes she was attacked by a sudden weakness, particularly after having bled from the mouth. During last severe winter, she could not bear the heat of the stove, because she felt then faint and oppressed,

Dr. Schmidtmann then enters into an enquiry, by what means the patient, in this case, was nourished and maintained in that state in which she was found; and having discussed the matter at large, he is of opinion that she drew, by resorption, such elementary particles from the atmosphere, as were sufficient for the nutrition of the body, and that the excretions were likewise replaced by the skin.

However incredible and miraculous this fact may seem, yet we find similar instances recorded by several authors, viz. by *Haller*, in his *Elementa Physiologiae, Tom. VI. Sect. II.* §. 6. *Conf. Memoires de l'Academie de Sciences de Toulouse, T. I.* 1783; and in *Richter's Library devoted to Surgery*, (in German) *Vol. XII. p.* 184. *Swieten Comment. in Boerhaav. Aph. T. III. p.* 508. *Histoire de l'Acad. Royale de Sciences, l'an* 1769; and in *Hufeland's Art of Prolonging Life, first edition, p.* 67. *Halpart van der Wiel Observat. rar. Centur. Poster.* In the London Magazine for Aug. 1769, there is likewise an account of a young woman, twenty-four years of age, who had fasted for two years, and whose excretions were also entirely suppressed.

A report has been lately spread in one of the newspapers, that the physicians of Osnabruck have, by an accurate and indefatigable inquisition, succeeded at last, in discovering the whole fact to be an imposture of the most subtle and intricate nature, for the sake of exciting pity, and getting presents from people, who came in great numbers from all parts of the neighbourhood to see this wonderful girl. It is said, that an account of the whole proceeding will be shortly published, which must certainly be very interesting; and we shall not omit to communicate it, after it has been confirmed.

Dr. Hildenbrand of Lemberg, in Gallizia, mentions, in Hufeland's Practical Journal, Vol. VII. No. 4. two remedies, which the common people, principally in the eastern parts of Gallizia, make general use of, to prevent and cure hydrophobia. One consists of a decoction of the wood of Taxus baccata Lin. and the other of a decoction of Lycopodium clavatum Lin. either of which may be used externally by washing the wound with it, or by giving it internally in large doses. With the latter, Dr. Hildenbrand himself has made some trials, as a prophylactic remedy; and it seemed to be efficacious, as no person who took it, was seized with

the canine madneſs; but he treated the wounds at the ſame time according to Le Roux's method, with butyrum antimonii. It is, however, curious to obſerve, that hydrophobia very ſeldom occurs in this country, though mad wolves frequently come from the neighbouring Carpatic mountains, and attack men and beaſts: the common uſe of thoſe remedies probably prevents the conſequences.

Dr. Jördens recommends the following ointment as a very excellent remedy againſt chronic ophthalmies of the humid kind. ℞. *Butyr. insuls. unc. jv. mercur. praecip. rubr. dr. ij. intime mistis adde aceti lithargyr. unc. jſs. tere donec omnis humiditas dispareat.* Of this unguent, about as much as the ſize of a ſmall pea is applied to the internal corner of the eyes every night before going to bed, and the next morning it is waſhed away with cold water: in more obſtinate caſes it may be uſed once or twice a day beſides. The ſpecies of opthalmy, where it is applicable, ſeems principally to originate from a debility, either partial of the eyes themſelves, or general in the nerves, by which an affluence of acrid humours is produced. The ointment has, therefore, been found uſeful in ſuch ophthalmies as ariſe from too great and continual uſe of the eyes by lucubration, &c. in hereditary ophthalmies, and thoſe of children during the time of teething. Venereal opthalmies of this kind were alſo cured by it. *(Arneman's Magazine for Surgery, Vol. II. No. 2.*

VACCINE INOCULATION.

From the Journal de Paris, of Prarial 23, (June 12, 1800.)

An account has been given, that on the 18th inſtant, thirty children were inoculated (in this city) with the Cow-pox, the matter being ſent from England; the proceſs according to the method recommended. Symptoms of infection appeared upon nine of the number, with the proper characters, and at the time ſpecified by Dr. Pearſon and other members of the London Committee. It is remarkable, that the Engliſh phyſicians, in their letter to the Committee of Paris, expreſs themſelves happy, conſidering the interval between taking the matter and its application, if the inoculation ſhould take effect upon one patient out of twenty; — but, on the contrary, nine out of thirty have been properly inoculated.

Upon the 19th, 20th, and 21ſt of the ſame month, eighteen children, upon whom the firſt inciſion had been ineffectual, were inoculated afreſh with the matter taken from thoſe upon whom it had ſucceeded. The Committee continues its experiments, and promiſes to give the Public a faithful detail of its proceedings.

Signed, on behalf of the Committee, Thourot.

Mr. F. J. Gall, at Vienna, has finiſhed a moſt elaborate work on the Exerciſe of the Brain, and on the poſſibility of recogniſing the ſeveral Faculties and Propenſities from the Conſtruction and Form of the Head and Skull. Mr. Geiſweiler, of Parliament Street, has in his poſſeſſion a part of the manuſcript, and ſeveral drawings, finiſhed in the moſt correct and elegant ſtyle, deſerving the attention of the curious. The Author intends to publiſh the work at the ſame time both in England and Germany.

Dr.

Dr. Beddoes has in the press a Collection of Observations on the external and internal Use of Nitric Acid in Siphylis. He had no intention of publishing another separate work on this subject, but so many new and interesting facts have been transmitted to him, that he very gladly complies with the desire of his correspondents in sending them to the press.

Dr. Saunders, physician to Guy's Hospital, will publish, in a few weeks, a Treatise on the Chemical History and Medical Powers of some of the most celebrated Mineral Waters, together with some Observations on the Cold and Warm Bath, &c.

Mr. Davy, Superintendant of the Medical Pneumatic Institution, is on the point of publishing a work, containing a detail of his numerous experiments on Gases and Respiration, under the title of *Researches Chemical and Philosophical chiefly concerning Nitrous Oxide, or Dephlogisticated Nitrous Gas and its Respiration.*

Mr. Stancliffe, of Caius College, Cambridge, F. L. S. and Lecturer of Chemistry at the Middlesex Hospital, intends to read a Course of Lectures on Chemistry at the Leverian Museum during the ensuing month. The lectures will commence on Wednesday, the second of July, at eight o'clock in the evening; and will be continued on every succeeding Monday and Friday, at the same hour, till the course is finished. The system to be pursued in these lectures will be that which is adopted by the professors in our universities, and by modern chemists; and the plan embraces the history, philosophy, and particular applications of the science, both to the arts and agriculture.

Dr. Dennison and Dr. Squire will begin, early in July, a Summer Course of Lectures on the Theory and Practice of Midwifery, and the Diseases of Women and Children. Notice of the day will be advertised in the public papers.

On the 17th of May died, at Gottingen, the celebrated Dr. Girtanner, author of many publications in Chemistry, Medicine, Natural History, and Politics. His last work was a representation of Darwin's System of Medicine. He was a native of Switzerland, but had been resident at Gottingen many years.

We are sorry to have it to state to our readers, that on Friday morning, the 27th of June, died (in consequence of an apoplectic fit) the celebrated Mr. Cruikshank, to whom the world is so much indebted for many valuable discoveries in Anatomy and Physiology, and who has so long filled the Teacher's chair in the Theatre of Anatomy, in Great Windmill Street, with such respectability. We are however glad, in having authority to say, that the Lectures in that school will be continued by Mr. Wilson, whose abilities have been long known, and who, as Colleague with Mr. Cruikshank, delivered the greatest part of the Lectures last season, with equal credit to himself and advantage to the public.

NEW MEDICAL PUBLICATIONS IN JUNE.

The Edinburgh Practice of Phyſic and Surgery, preceded by an Abſtract of the Theory of Medicine, and the Noſology of Dr. Cullen, and including upwards of 500 authentic Formulæ from the Books of the London Hoſpitals, and from the Lectures and Writings of the moſt eminent public Teachers; with Plates, 8vo. 14s. boards. Kearſley.

Obſervations on Mr. Simmons's Detection, &c. With a Defence of the Ceſarean Operation, an Examination of Dr. Oſborn's Opinions relative to Embryulcia, and an Account of the Method of Delivering by Embryotomy; by JOHN HULL, M. D. 8vo. 9s. boards. Bickerſtaff.

Obſervations on the Gout and Rheumatiſm; to which are annexed Phænomena Phyſiologica, iſſuing in the Cure of thoſe Diſeaſes; by William Peter Whyte; 2s. 6d. boards. Rivingtons.

Memorials on the Medical Department of Naval Service, tranſmitted to the Lords of the Admiralty; to which is annexed, an Addreſs to Parliament on the Expediency of amending the Laws relative to the Exportation of Corn; by WILLIAM RENWICK, Surgeon in the Royal Navy, 1s. Longman.

To CORRESPONDENTS.

We are much obliged to our Correſpondent at Newcaſtle, for the zeal he has diſcovered in the promotion of an important improvement in the practice of medicine; but we beg leave to aſſure him, that ſuch paragraphs as thoſe he has read in the Newcaſtle Advertiſer, can never "prevent the adoption of the Vaccine Inoculation" in any part of the kingdom, while it continues to be ſupported and encouraged by the moſt reſpectable practitioners. A paragraph or letter, very ſimilar to the one he ſent us a copy of, appeared a few weeks ago in a London Paper, but the Faculty here treated it with the ſilent contempt it merited; being perſuaded that the declamatory effuſions of ſuch writers, when oppoſed to the opinions of Jenner, Woodville, Pearſon, Denman, Saunders, Cline, Keate, Ring, Knight, Abernethy, and many others equally reſpectable, can have no weight with a diſcerning public. If, however, our Correſpondent really believes that ſuch paragraphs, with ſuch ſignatures, or without a name, can poſſibly operate to the diſcouragement of the New Inoculation, in parts diſtant from the metropolis, we deem it will be ſufficient for him, or any other of our Correſpondents, to refer their ſceptical patients to the exalted and reſpectable names which appear in the firſt pages of this Number.

A Pharmaceutical Correſpondent concludes, from the Caſe given at page 535 of the Third Volume, that corroſive ſublimate is either much cheaper in the neighbourhood of Ketley than in London, or that the article ſold there was adulterated.

Communications are received from Dr. Alderſon *and Mr.* Watt.

. Mr Watt's machine for curing distorted limbs.

Fig 1.

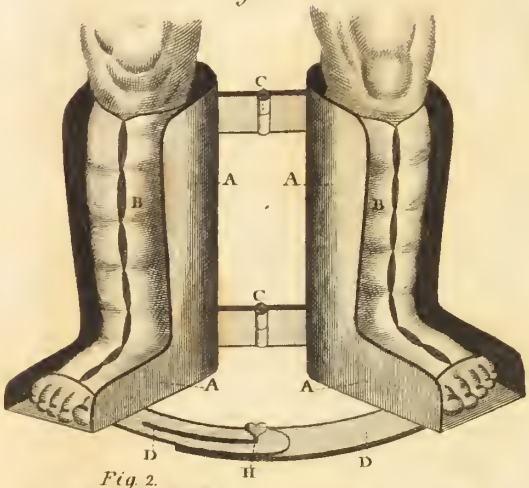


Fig 2.

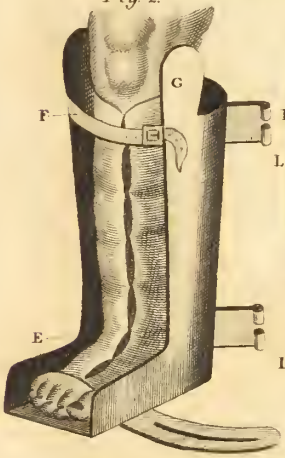
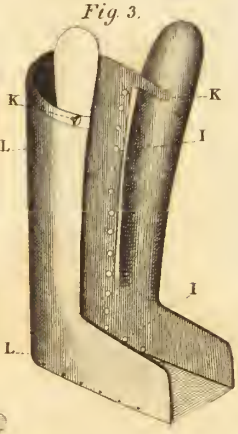


Fig 3.



. Mr Humboldt's Anthracome

Printed for R. Phillips, N°71, St Paul's Church Yard

THE

Medical and Phyſical Journal.

VOL. IV.] AUGUST, 1800. [NO. XVIII.

Description of a new Machine for curing diſtorted Limbs.

[With an Engraving.]

Communicated by Mr. ROBERT WATT, Surgeon, in PAISLEY.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IN the Preface to the firſt volume of your Medical and Phyſical Journal, you mention your not being ſo fortunate in the departments of Anatomy and Surgery, as in the other branches of medical ſcience. This may be owing to theſe two having arrived nearer to perfection than any of the reſt; or, it may be owing to the negligence of ſome practitioners, in not communicating freely to the world whatever chance may have thrown into their way. Others there are, who, actuated by a more ſelfiſh and degrading principle, with carefully to conceal from the public, as far as poſſible, any improvement or diſcovery they may have made, in order that none but themſelves may reap the benefit. The idea, however, is abſurd, and equally injurious to the perſon himſelf, as to the public; for it frequently happens, that the more freely a man communicates his improvements and diſcoveries to the world, the more generouſly will he be rewarded. At any rate, ſuch perſons feel a reward in their breaſt, of which none but themſelves can have any conception. It ſhall, therefore, be my ambition, through the excellent medium of your Journal, to communicate to the public whatever hints or improvements I may in future be able to make.

There is one malady to which the human race is not infrequently ſubjected, and for which, ſo far as I know, ſurgery has made little or no proviſion, namely, the diſtorted limbs of infants. What I chiefly refer to, are thoſe two ſpecies of

distortion, known by the terms varus and valgus. Whether the fault has been owing to the parents of these unfortunate children, in not having applied in time; or, whether it has been owing to a deficiency in the medical assistance they have employed, it is, perhaps, impossible to determine; but certain it is, that numbers of both sexes have remained in this unhappy situation for life: whereas, in this part of the country, I have not seen a single instance of one who has not been cured of the disease.

It is more than probable, that in many of these cases the fault has been owing to the parents. They, as if they looked upon themselves as the cause of the misfortune, and of course blameable, carefully conceal the matter as long as possible, not only from the public, but frequently even from their family practitioner. It is also a commonly received opinion, that the regular bred surgeon can afford little or no assistance in such uncommon disorders as those of distorted limbs. Therefore, if application is made at all, it is made to itinerants and quacks; who, after having made what they can of the credulous parents, generally leave the unhappy victims in a worse state than that in which they found them.

This disorder may be occasioned by different causes; by a morbid state of the bones, or contraction of the muscles; by original mal-conformation, or wrong position in the womb. But from whatever cause the distortion may proceed, the reducing them to the natural position must be accomplished by nearly the same means; that is, by judicious pressure upon the convex side. In some cases the disorder lies in the ankle joint, while the leg and knee are perfectly natural; in others, and perhaps, the greatest number, it is occasioned by a bending of the bones of the leg, by which the toes are turned either out or in, according as the bones are bent to the one side or to the other.

A case of the first kind, where the disorder lay principally in the ankle joint, occurred to me lately. J. Wardrop, a child about seven weeks old, had her feet so distorted, that the toes of the one pointed directly to the ankle of the other. Upon the external ankle of the left, and down the back of the foot, there was a considerable rising, with a corresponding hollow in the other side, which showed that the bones of the ankle joint were shifted completely out of their place. The right foot had more of the natural shape, but, with regard to the directions of the toes, it was as much distorted as the other. The soles of both were considerably turned, so that, when walking, she would have gone directly upon the outsides of her feet.

From

From her birth till application was made to me, various attempts had been made to correct the deformity; ſhoes, boots, and bandages of all kinds had been tried, but without ſucceſs. Some of them it was found impoſſible to retain for any length of time, or if retained, they hurt the feet ſo much, that they were under the neceſſity of removing; others, and that the greateſt number, if they did no harm, they did as little good. When ſhe was firſt put under my care, as I had never ſeen a caſe of the ſame kind treated before, I began to turn over every volume upon ſurgery I could lay my hands on; but finding nothing to my purpoſe ſave in general terms, I began to think for myſelf, when I fell upon the following contrivance, which I am happy to ſay, has anſwered the purpoſe extremely well.

Figure I. repreſents the machine containing the limbs of the child. AAAA, the legs and feet of the machine, which ought to be made of white iron, hardened leather, or ſome other firm ſubſtance, ſtrong enough to retain the limbs in a proper poſition. BB, two pieces of ſoft leather fixed to the inſide of the legs of the machine, laced upon the foreſide of the limbs of the child to retain them in their place: the toes ought to be left uncovered, by this means we can judge more accurately of the poſition of the feet. CC, two pieces of iron with joints in the middle; theſe connect the limbs together, and by the joints allow the toes to be ſeparated from one another, or brought nearer, according as the caſe may require. DD, two curved pieces of iron fixed to the toes of the machine, the one having a long ſlit, the other a ſcrew, by which means the toes can be fixed in any poſition we pleaſe.

To prevent the child's feet from being hurt by preſſure againſt the inſide of the machine, let them be rolled with a ſoft flannel roller from the toes up to the knee, and frequently anointed with ſome emolient liniment. At firſt, the machine ſhould be applied only for a few hours at once; but after ſome time, it may be kept on for two or three days without doing the leaſt injury to the child's feet, and with conſiderably more advantage than when it is frequently removed. In the above caſe, at one time the machine was kept on without being changed for upwards of four days; and I obſerved, that in this interval they made more progreſs than ever they had done before in the ſame time, when the machine was changed daily. To keep the child quiet while we were putting on the inſtrument, and through the night, I found it neceſſary to uſe a gentle opiate once in the twenty-four hours. This, however, did no hurt to the child's health; and as ſoon as the operation was finiſhed, we gave it up entirely.

In turning out or in the toes it ſhould be done by degrees, and not all at once: this may be eaſily managed by means of the ſcrew H. By making a ſmall advance every day, a ſhort time will bring them to the place we wiſh. And here it may be proper to obſerve, that whether the feet are turned out or in, it will be neceſſary to bring them about with the machine a little farther than we wiſh them to ſtand, for after it is finally removed they naturally recede a little.

I need ſcarcely obſerve too, that though the one foot only ſhould be diſtorted, it will be neceſſary to uſe a double machine, that is, a machine with two legs, one for the ſtraight limb as well as one for the crooked: for it is impoſſible to retain the diſtorted one in a proper poſition without connecting it to the other. In this way the cure will be done with the greateſt eaſe, and no injury whatever will be done to the ſound limb. In the caſe above related, although the machine was kept on for nearly two months, yet there was not a ſingle ſcratch or bruiſe upon her whole limbs, and all the while ſhe grew, and was as healthy as ever ſhe was, either before or ſince.

When I firſt thought of this inſtrument, I had no idea of its being applied to any other caſe but the *vari* and *valgi*, and theſe only when the diſorder happened to lie in the ankle joint. But I have ſince thought, that by a ſmall alteration, it may be applied to all the different kinds of diſtorted limbs with conſiderable eaſe and advantage.

Figure II. repreſents the half of the machine, in every reſpect ſimilar to the one above deſcribed, ſave only, that one of its ſides from the heel up is removed, and in place of it a ſpring, the under end of which is fixed at E, to the ſide of the heel; the other, by means of the ſtrap F, to the top of the machine. The convex ſide of the ſpring, ſtuffed and covered with ſoft leather, being applied to the convex ſide of the limb, by means of the ſtrap F. any degree of preſſure can be made which the practitioner may judge neceſſary. The ſide of the leg of the machine oppoſite the ſpring, muſt have a head as repreſented at G, to reſt againſt the outer or inner condyle of the femur, according as the caſe may require. If the bones are bent forward, as is often the caſe, by fixing the ſpring upon the foreſide, and cauſing it to preſs upon the convexity of the limb, they may be cured in the ſame manner as above directed. By uſing a ſpring inſtead of ſtraps round the limb, as directed by Mr. Benjamin Bell, a more uniform and effectual preſſure can be made. With regard to the ſtrength of the ſpring, no general rule can be given; this muſt depend entirely upon the age of the patient, or the degree of force required to ſtraighten the limb.

Figure

Figure III. repreſents one leg of the machine without the child's limb, having a ſpring fixed to the one ſide of the heel, as above directed. At LL and II, there muſt be two rows of ſmall holes, to which the leather which ſurrounds the child's limbs muſt be fixed. K repreſents a ſcrew with which the ſpring may be fixed inſtead of the ſtrap F. I am,

GENTLEMEN,

Your humble ſervant,

Paiſley, April 3, 1800. R. WATT.

P. S. At the time when the above was written and ready to be ſent off, J. Wilſon, a child about eight days old, having her feet diſtorted in the ſame manner as above deſcribed, but conſiderably worſe, was put under my care; I treated her in the ſame manner and with equal ſucceſs. In the courſe of two months ſhe was completely cured, and her feet are now as natural and well-ſhaped as any other child's of the ſame age. At the firſt, the oſſa calcium ſeemed either to be extremely ſmall, or completely wanting; but after applying the machine for a few weeks, they grew and became perfectly well formed. The protuberances too upon the outſides of her feet, produced by the diſplacing of the metatarſal bones, diſappeared, and the hollow below the internal ankle filled up. From the ſucceſs in treating theſe two caſes, I am inclined to think that there is no kind of diſtorted limb, however formidable it may appear, if taken in time, but may be cured by the ſame means.

Some Remarks on the Medicinal Properties of Ledum Palustre.

By WILLIAM GEORGE MATON, M. B. F. R. S. &c.

NOTWITHSTANDING the multitude and variety of the articles already received into the Materia Medica, and the conſequent heſitation with which cautious practitioners adopt the exhibition of leſs noted medicines, the healing art cannot ſurely be provided with too many reſources; nor will the ſcientific phyſician ceaſe to ſeek in the treaſures of Nature for new ſubſtances ſubſervient to his profeſſion. But, without preſuming to recommend any ſubſtances which have very recently been diſcovered to poſſeſs medical properties, I wiſh only to bring into general notice, ſome which have long been known, but

but which do not ſeem to have been ſubjected to experiment in this country.

Of the diſeaſes which moſt obſtinately reſiſt the ordinary means of cure, none are leſs productive of credit to the practitioner, or more haraſſing to the patient, than thoſe which are commonly called *cutaneous*; and in ſuch caſes it may be worth while to try the effects of medicines ever ſo partially recommended. A very ingenious foreign phyſician has lately informed me, that a chronic diſeaſe of the impetiginous claſs, which had reſiſted various other remedies, was at length completely cured by an infuſion of Ledum paluſtre taken internally. This fact did not appear ſurpriſing, when I recollected that the ſame plant had been recommended by the Swedes for the cure of Pſora. In the 8th vol. of the *Amœnitates Academicæ*, edited by Schreber, Dr. Weſtring adviſes the uſe of the infuſion as a bath. Profeſſor Pallas ſtates, that the ſame remedy is employed by the Ruſſians. A Swediſh phyſician, of the name of Wahlbom, cured a moſt obſtinate caſe of tinea by repeated waſhings with a decoction of the Ledum. Of the general aſtringent properties of the plant, I find accounts ſcattered in ſeveral writers. In Hungary it is uſed as a gargariſm in ulcerations of the throat; and it has been much extolled by Scopoli for its utility in ſuch caſes. Weſtring's Diſſertation, before mentioned, informs us, that it manifeſted a moſt decided efficacy in an epidemical angina, which was of a malignant nature; but by means of gargariſms and cataplaſms of the Ledum, yielded very ſpeedily. Jacquin records ſimilar ſucceſs attending its exhibition for diſeaſes of the throat among the inhabitants of the Carpathian mountains. Theſe evidences, however, relate principally to the external uſe of Ledum paluſtre. The exhibition of it internally is not without conſiderable teſtimony in its favour. Falk mentions, that in ſome parts of the Ruſſian empire, it is not an unfrequent remedy for intermittents. But what would lead me to form a ſtill higher idea of the value of this vegetable, is a fact recorded by the celebrated Linnæus, in his Travels to Weſtrogothia. He ſays, that the common people in that province cure Pertuſis by means of the infuſion. It was through the great naturaliſt, probably, that the medicine obtained a place in the Pharmacopeia of the Swedes, among whom, I underſtand, it is very generally uſed. Roſenſtein (in his Diſeaſes of Children) recommends it for the hooping cough; but it is alſo employed as a remedy for diarrhœa and dyſentery among his countrymen.

Theſe obſervations, to which I only regret that I have nothing to add founded on any experience of my own, may be ſufficient perhaps to induce Engliſh practitioners to make trial of

of a plant which would ſeem to poſſeſs very active properties. Its very odour indicates an aromatic quality, though this is not ſo ſtrong in the ſpring as during the ſtate of floreſcence. Weſtring mentions a curious fact reſpecting the permanence of the aroma. A dried ſpecimen, which he found in the Burſerian Herbarium at Upſal, retained a very ſenſible fragrance, though upwards of 150 years had elapſed from the time of its being gathered. An infuſion of the leaves is ſomewhat bitter, and conveys a ſenſation to the palate ſimilar to that produced by turpentine; a good evidence of its poſſeſſing an aſtringency. There is undoubtedly a narcotic quality in a ſtrong decoction of the plant, ſome of the northern nations being accuſtomed to boil ſticks of it in beer, for the ſake of imparting to the latter an inebriating effect; and this liquor has been obſerved to occaſion violent vomitting, cephalalgia, and even ſyncope. Some caution, therefore, is neceſſary in the exhibition of the vegetable; and though in many caſes it may be adviſeable to keep up that ſtate, reſembling ſtupor, by which the advantageous effects of cicuta and other narcotics are produced, the doſe ought to be ſmall at firſt. Of the recent plant, four ounces may be infuſed in a quart of boiling water, and two ounces of the ſtrained liquor are ſufficient for the firſt exhibition.

Ledum paluſtre grows ſo abundantly in all the northern parts of the continent, that large quantities may be obtained without difficulty; though, as its favourite ſoil is of a moiſt, boggy nature, and as it is found on the declivities of lofty mountains, the cultivation of this plant may not often prove very ſucceſsful. No animals appear to be fond of it, excepting the goat, which Linnæus tells us, (in the Pan Succus) will often brouze it; and there is a ſpecies of phalæna that dwells on its leaves; but inſects in general ſhun, and are ſo much affected by its odour, that the ſmoke is uſed for the extermination of lice and other vermin. The ſpirit obtained by diſtillation would ſeem likely to be moſt efficacious for this purpoſe.

There is another ſpecies of Ledum (ſcarcely deſerving, however, to be conſidered as different) which grows very plentifully in the vicinity of Hudſon's Bay, in North America, and is generally known by the name of *Labrador Tea*, an appellation that indicates its being uſed as a beverage by the natives of that diſtrict, probably on account of this plant poſſeſſing qualities ſimilar to thoſe of Ledum paluſtre,—I mean more particularly, that of intoxicating. Ledum latifolium, as the name implies, is diſtinguiſhed by its broader leaves; but in no other reſpect does it appear to differ from its congener. I have taſted infuſions of the dried leaves, and found the flavour the ſame. This plant is well deſcribed by Jacquin in his *Collectanea*,

nea, tom. ii. and in the new edition of the *Species Plantarum*, by Wildenow, diſtinguiſhed thus, *Ledum (latifolium) foliis oblongis, margine revolutis, subtus tomentoris floribus subpentandris*, tom. ii. p. 602.

P. S. Since the above was written, I have found in the Tranſactions of the Academy of Sciences of Stockholm, (1774) an account of the efficacy of Ledum paluſtre as a remedy for Lepra. Dr. Odhelius ſpeaks of his ſucceſs in the exhibition of it with the higheſt ſatisfaction.

W. G. M.

Craven Street, July 3, 1800.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

YOU have given ample room to the effects of Digitalis, and communicated much uſeful information on the ſubject of the Cow-pox, the happieſt diſcovery of the preſent age; will you allow a little room in your valuable publication for the following caſes of the efficacy of Tractors?

Having furniſhed my ingenious friend, Mr. Biron, Houſe Apothecary to the General Infirmary here, with a pair of Tractors, he loſt no time in making the experiments; the reſult of which, I will detail in his own words.

Robt. Wood, aged 67, on June 4th was operated upon with Tractors, for a rheumatic affection of his hip, which he has had for theſe eight months. During the application of the Tractors, which was continued for ſeven minutes, no effects were produced, except a profuſe perſpiration and a general tremor. On ceaſing the application of the Tractors, to his inexpreſſible joy, and our ſatisfaction, the good effects of our labour were now produced and acknowledged, for he voluntarily aſſured us that he could walk with perfect eaſe, for he had the entire motion of the joint, and that he was free from pain. To uſe his own words, "As to the pain I have now, I do not care if I have it all my life; that will matter nothing; you may take your medicines, I'll have no more of them; theſe are the things for me." And prior to his leaving the Infirmary, he remarked how very warm thoſe parts were, where the Tractors had been applied, and then walked from the Infirmary to his own houſe, aſſuring his companion Bowſon, that he could very well walk to Beverley. June 5th, walked to the Infirmary this morning with

with very trifling difficulty; was so much pleased with the relief, or rather cure obtained yesterday, that, to use his own words again, he had very joyfully spread abroad the intelligence to his acquaintance. Has had some return of pain this morning, which however, was removed by another application; and when asked how he felt, declared, "as bonny as augh," and then marched off, with a countenance expressive of his gratitude for the wonderful relief he had obtained.

Robert Bowser, aged 37. June 4th, Pain and weakness in his right arm, which he has had for some months; after applying the Tractors one minute and a half, feels less pain, 2° heat; 4°, pain much increased; 5°, compared the Tractors to red hot needles; the application of the Tractors was continued four minutes longer; as the pain increased so did the heat to a violent degree. On moving the arm after the operation, he assured us he was very greatly relieved. 5th, His pain has lessened very considerably since yesterday, but moves his arm yet with difficulty. 6th, He returned home yesterday, and says, he slept for near three hours, when he was suddenly awoke by a violent burning heat in the arm, in such directions as the Tractors, after which he was much better.

Ann Hill, aged 57. Pain in her right arm and shoulder, which she has had for nine months; the Tractors were applied one minute and a half, when she perceived an increase of warmth on the part; 3°, the pain removed from the shoulder to the elbow; 5°, she suddenly exclaimed that she was now cured of the worst pain. "Bless me! why, who cou'd have thought it, that them little things cou'd pull the pain from one? Well, to be sure, the longer one lives the more one sees; ah dear! Well, thank God, I hope I shall be able to wash again, and earn a bit of bread; well, I can get my gown on now, in the morning I cou'd not, if it had been ever so; well, gentlemen, I return you many thanks; I reckon you'll do me again, and then you'll pull it all out." June 5th, Had pain in the shoulder once last night, but since then it has been chiefly near the elbow. The Tractors were applied as before, a greater warmth was produced in the part than before. 6th, She assures us the pain is now trifling, and complains only of weakness in the part. 8th, As she is now free from pain, wishes to return thanks.

John Smith, aged 39. Pain in the knee, ankle, and foot. June 10th, the Tractors were applied one minute and a half, when a general warmth was very evident; 2°, much less pain; 3°, the Tractors carry heat with him wherever they go. His feet prior to the application were always cold, now agreeably warm; in six minutes he assured us he could walk with greater

eaſe than he had done for three months; and to convince us how greatly he was relieved, he repeatedly, with great violence, ſtruck his feet againſt the tables and chairs. June 12th, the pain is much relieved, but the foreneſs in the ſoles of the feet ſtill remains; 2°, much warmth wherever the Tractors are carried; 3°, Do you think yourſelf much relieved? "Relieved! ſir, I believe I am; why, I am quite a new man from what I was." June 13, no pain in the knees or ankles, a trifling ſtiffneſs in the hip joint, which was removed by applying the Tractors round the joint for five minutes only.

Thos. Jones, aged 70. Pain in the hand and arm; with ſome difficulty he was able to move the fingers, June 13. As Wood and Smith were with this man previous to the operation, and had acquainted him with the wonderful efficacy of theſe Tractors producing warmth wherever carried, and immediately removing, or wonderfully leſſening the pain, I concluded that the ſame effects would be produced of courſe upon his arm. I determined to try if we could not produce a contrary effect; I told him I thought his caſe differed very materially from common rheumatiſm, and that a caſe of that kind was never immediately relieved by the application of the Tractors; on the contrary, that the pain was frequently increaſed for ſome hours, and that no additional warmth was perceived in the part, and that generally the patient ſlept ill the greater part of the firſt night, but that in the morning the good effects would ſoon be diſcovered. After applying the Tractors five minutes, he aſſured me that the pain was conſiderably increaſed; before he left the Infirmary, the pain was ſo violent, that he was unable to move his arm. June 14th, "You are a mere prophet, ſir; never did a poor devil ſpend ſuch a night; I toſſed and tumbled about till five o'clock, in ſuch pain, and then I got ſuch nice ſleep, and I have been eaſier ever ſince; you'll cure me; and if you do, I'll remember you, for I have a good ſhot, and they ſay there's plenty of birds." The Tractors were applied again, when the additional warmth was produced, as in the other caſes, with ſome trifling diminution of pain.

I am, GENTLEMEN, your's, &c.

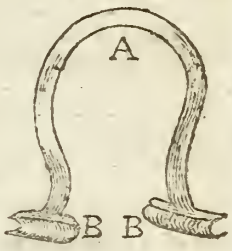
Hull, June 19, 1800. JOHN ALDERSON, M. D.

P. S. I ſhall make no comments. The Tractors were made of two pieces of wood, and covered, the one with red, and the other with black ſealing wax, and carefully kept in cotton, &c. I have ſhewn the patients to the whole faculty of the houſe, to whoſe interrogations they have anſwered as here detailed, and I have this day ſeen them return thanks at the board of truſtees, taking with them a paper for the clergy of their reſpective churches, in which they will next Sunday return their ſolemn thanks to the Almighty for their cures.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

PERMIT me to offer the model of a Speculum Oculi, for inſertion in the Medical and Phyſical Journal. It conſiſts of two parallel grooves, connected by a gently elaſtic ſteel arch; when we wiſh to apply it, the eye-lids are firſt opened, till they are inſerted in the grooves of the Speculum; the ſpring is then let go, and the eye is expoſed by the action of the ſpring, which is held in its place by the re-action of the eye-lids, without the aid of an aſſiſtant; an improvement, deſirable in the operation of extracting cataract.



The anecdote which gave riſe to the idea of the inſtrument, was as follows: A late medical gentleman in Edinburgh, performing the operation of extraction, employed the uſual ſpeculi of drawing down the under eye-lid by the hook, and elevating the upper one by the curved wire and an aſſiſtant. His aſſiſtant was not ſufficiently ſkilful or attentive, ſo that when the cornea was cut through, and the extraction about to be performed, an unguarded preſſure was made upon the eye with the wire, and the whole humours burſt out. It is evident that this inſtrument will prevent the like accident in future. I have tried it in real practice, and it has completely anſwered my expectations, as well as my other medical friends. I remain,

GENTLEMEN,

Your moſt obedient,

Paiſley, July 8, 1800. THOMAS RICHMOND.

A. The ſteel arch. B. B. The parallel grooves.

STATE OF DISEASES IN LONDON.

Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20*th of June to the* 20*th of July,* 1800.

	No. of Caſes.		No. of Caſes.
ACUTE DISEASES.		Dyſentery - - - - -	3
Typhus mitior - - - -	7	CHRONIC DISEASES.	
Typhus gravior - - -	3	Phthiſis Pulmonalis - - -	3
Small-Pox - - - - -	7	Cough with Dyſpnœa - -	6

Hæmoptoe	3	Pſora	2
Hydrothorax	4	Tinea	2
Gaſtrodynia	3	Herpes Puſtuloſus	1
Dyſpepſia	10	Chronic Rheumatiſm	10
Diarrhœa	16	PUERPERAL DISEASES.	
Colica Pictonum	1	Low Puerperal Fever	2
Aſcites	6	Menorrhagia lochialis	3
Anaſarca	4	Iſchuria	1
Prolapſus Ani	1	INFANTILE DISEASES.	
Inteſtinal Hæmorrhagy	2	Diarrhœa	6
Cephalalgia	8	Watery Gripes	3
Vertigo	5	Aphthæ	4
Hemiplegia	3	Scrophula	2
Epilepſy	4		

One of the caſes of ſmall-pox referred to in the liſt, was that of a pregnant woman, upon whom the puſtulary eruption appeared a few days previouſly to her labour. The diſeaſe was of the confluent kind, and, as might be expected, in a few days after her delivery, it terminated fatally. The child was born without any marks of infection; but on the fourth day after its birth, an eruption appeared on the face and neck, and on different parts of the body, which proceeded in the uſual way to form puſtules, of which there was a conſiderable number, and in a few days it fell a victim to the diſeaſe.

A variety of opinions has been formed reſpecting the effect of the variolous infection on the fœtus in utero; a ſufficient number of inſtances, however, has been recorded, to aſcertain that the diſeaſe may be communicated from the mother to the child. In ſome caſes, the body of the child, at its birth, has been covered with puſtules, and the nature of the diſeaſe has been moſt ſatisfactorily aſcertained by inoculating with matter taken from the puſtules.

In other caſes, as in the preſent inſtance, there has been no appearance of the diſeaſe at the time of the birth; but an eruption and other ſymptoms of the diſeaſe have appeared ſo early as to aſcertain that the infection muſt have been received previouſly to the removal of the child from the uterus. Thus, as Dr. Meade obſerves, the ſmall-pox which the infant has contracted in the womb, breaks forth on the ſecond, third, or any other day before the 8th from the delivery.

MONTHLY

MONTHLY REPORT of DISEASES,

Admitted under the Care of the PHYSICIANS of the FINSBURY DISPENSARY, St. John's Square, Clerkenwell.

The District, in which the Patients of the Finsbury Dispensary are visited, comprehends the Parishes of St. James, and of St John, Clerkenwell; of St. Luke; of St Sepulchre within and without; of St. Bartholomew, the Great and the Less; the Liberties of the Rolls, and of Glass-House Yard; the Town of Islington; the Parishes of St. Pancras; of St. Andrew, Holborn; and of St. George the Martyr, Queen's-Square. This Tract of Ground may properly enough be termed, a North Western District of the Metropolis.

LIST of DISEASES, &c. from June 20, to July 20.

	No. of Cases.		No. of Cases.
Mania	4	Paralysis	2
Typhus	29	Cough and Dyspnœa	8
Psora	5	Chronic Rheumatism	6
Anasarca	4	Acute Rheumatism	2
Dyspepsia & Hypochondriasis	21	Lumbago	1
Amenorrhœa	11	Diarrhœa	7
Leucorrhœa	6	Hæmoptysis	3
Menorrhagia	3	Pneumonia	1
Infantile Diseases	14	Asthenia	2
Cephalæa	3	Phthisis	8
Dysentery	2	Hysteria	3
Sore Throat	1	Petechiæ	1
Hæmorrhois	1	Cynanche	4
Worms	4	Pertussis	2
Schrophula	6	Herpes	4
Jaundice	6	Hydrocephalus	3

The heat of the present being so remarkably more intense than that of many preceding summers, has produced, as might have been expected, an evident and very important influence upon the diseases of the last month.

Typhus now prevails, attended almost uniformly with coma, and a very high degree of delirium.

After the emetic, diluents, and aperients usually employed in the first stage of this disorder, recourse was in general had to the washing of the patient with cold water,* to the use of the

* In the cases alluded to there were no conveniences for the administration of cold water, in the manner which has been recommended by Dr. Currie, of Liverpool; whose respectable authority would otherwise have been alone sufficient to have authorised the experiment. It would seem almost improper to mention the name of that distinguished writer, without expressing an admiration of his talents; and still more, of his zealous exertion of them in the advancement of medical information.

He

the Peruvian bark, and, in some instances, to a very liberal administration of wine; for which, in the case of this fever, perhaps, no adequate substitute is to be found amongst all the variety of the Pharmacopeia.

The present virulent nature of typhus might be elucidated by a circumstance that is personally interesting to the drawer up of this report. Within the contracted sphere of his knowledge in London, more than one medical practitioner, in attending patients afflicted with this disease, have, during the course of this last month, fallen a victim to the fatal malignity of its contagion.

One patient, a very short time after the attack of the fever, was seized with a paroxysm of madness, the violence of which soon put a final close to his existence. It should be remarked, however, that in this particular case, a strong predisposition to insanity had probably been induced by various habits of moral irregularity. When, either by a life of debauchery, or the corroding operation of any chronic passion, the structure of the mind has been disorganized, there is little hope from either medical or moral regimen of an entire and permanent restoration.

The case of mania noticed in the report of last month as combined with religious fanaticism, took place at one of those periods of life which, in females, operate so frequently as exciting causes of this disease. Another patient, that occurred about the same time, became decidedly and violently maniacal, in consequence, as there was reason to believe, of a very severe misfortune which he had experienced on the day preceding the attack of his disorder. Both of these patients were soon restored to health, without any considerable degree of medical interference.

When mental derangement originates from either of the sources that gave rise to the complaint in the two instances last mentioned; that is, either from a physical state that exists only for a short period, or from the sudden impression of an unlooked-for calamity, an expectation of cure may not, perhaps, in many instances, be unreasonably entertained.

In the cases of dyspepsia and hypochondriasis, which were of very long standing, the prescriptions of the physicians were principally confined to country air, cold, and, if possible, seabathing; and, amongst other things, a respite from the use of

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He who affords instruction to physicians, must appear, in an eminent degree, to deserve the general gratitude of mankind, when it is considered how much their health, a circumstance so essential to the value of existence, is dependant upon the skill of that profession.

drugs.

drugs, which, when they become, as in such instances they too frequently do, the daily food of a person for many years, cannot fail essentially to impair the organs of digestion, and thereby to aggravate, in the end, those diseases which they are intended, and might at first have been calculated, to relieve. A case may sometimes appear to be the result of a very long course of medicine, merely because a very long course of medicine allows time for the operation of Nature, which of itself will often restore a patient, in spite even of all the nauseating doses that are administered. By no means, however, is it intended to deduct, in the slightest degree, from the true value of pharmaceutical remedies, which are allowed to be, in many instances, highly important, and even absolutely necessary to the cure of a vast variety of disorders. A proof of their salutary efficacy was lately exhibited to one of the physicians of the Dispensary, in the case of a patient, who, affected with an obstruction of the biliary ducts, accompanied with the countenance and complexion appropriate to jaundice, the most extreme dejection of spirits, and nearly an entire failure of all the voluntary muscles, was, in a few days, restored to strength, cheerfulness, and the physiognomy of health, principally by the energy of mercurial preparations.

W. W.

Hatton Garden, July 21, 1800. J. R.

Diseases admitted under the Care of the Physicians of the Westminster Hospital, from the 21*st of June, to the* 23*d of July,* 1800.

Continued Fever	26	Dyspepsia	3
Quotidian	1	Dyspnœa	2
Pleurisy	2	Dysuria	1
Erysipelas	1	Epilepsy	2
Measles	3	Gastrodinia	2
Chicken Pox	1	Hæmatemesis	2
Scarlet Fever	1	Hæmorrhois	1
Amenorrhœa	5	Hooping Cough	3
Anasarca	4	Hydrothorax	3
Angina Pectoris	1	Itch	9
Asthenia	10	Jaundice.	1
Asthma	3	Lepra Græc	2
Catarrh	2	Leucorrhœa	3
Cephalæa	5	Menorrhagia	3
Cholera	3	Obstipatis	2
Colic	2	Paralysis	3
Convulsions	2	Phthisis	5
Cough	9	Pleurodynia	1
Diarrhœa	4	Podagra	2

Rheumatism

Rheumatiſm - - - - -	5	Syphilis - - - - - - -	1
Struma - - - - - - -	2	Tinea - - - - - - -	2
Syncope - - - - - - -	1	Worms - - - - - - -	4

Experiments, by Dr. CHARLES DARWIN.

[Continued from p. 50—53 of our laſt.]

EXP. XV. Two ounces of viſcid *mucus*, blown from the noſe, were put into a glaſs; to theſe were added two drachms of *alkaline lixivium*; a *complete ſolution* ſoon took place; and upon the addition of two oz. of water, there did not occur any ſeparation. The glaſs was allowed to remain at reſt for the ſpace of a fortnight, and during that time a very ſlight ſeparation only had taken place; which conſiſted ſolely of light flakes of mucus ſwimming in the water; but nothing appeared in the bottom of the glaſs, which could in the leaſt degree deſerve the name of ſediment. Previous to making this and the preceding experiments, it is neceſſary to examine the water to be uſed, as I once was ſurprized to ſee a conſiderable cloud, and then a ſediment occur on adding water to mucus and alkaline lixivium; but I ſoon diſcovered that this was owing to the impurity of the water added. Alſo in conducting this experiment, we muſt let the mucus and the alkaline lixivium remain at leaſt an hour united, before we add the water; and if we obſerve any mucus undiſſolved by the alkali, it ſhould be removed before we add the water.

N. B. In ſome repetitions of theſe experiments, I have ſeen a ſlight cloud in the ſpace of twelve hours, but never immediately.

EXP. XVI. Two drachms of *purulent matter*, obtained in the opening of a large abſceſs, were put into a glaſs, and agitated with about as much of the *alkaline cauſtic* lixivium; in a ſhort time there was an intimate mixture, and the pus ſeemed to be diſſolved. But upon the addition of water a ſeparation took place, and in a few minutes a conſiderable ſediment, apparently of purulent matter, ſunk to the bottom. When allowed to remain at reſt, it continued in this condition for ſeveral days: But at the end of a fortnight, what had at firſt appeared as a ſediment floated in the ſurrounding fluid.

N. B. It will ſometimes be difficult to unite the pus and alkali.

[To be continued.]

On

On the Perspirable Fluids; by Dr. MITCHILL.

[Concluded from our laſt, p. 13.]

" Thus a ſolution of an alkaline ſalt, or of a ſoap, detaches all *acids* from the cuticle and from clothes, as likewiſe from all oily or other connections they may have formed. And the ſame lixivial and ſaponaceous mixtures remove all *greasy* ſubſtances, by virtue of the ſtronger attraction they exert toward theſe, than theſe poſſeſs for the cuticle, or the garment worn next to it. On the cleanſing of clothes, there is one fact worthy of being mentioned. Sailors, on Weſt India voyages, when deſtitute of ſoap, frequently waſh their clothes in water, WITH THE AID OF MOLASSES, as a ſubſtitute for ſoap. They find this practice anſwer pretty well. Sugar is known to decompound nitrous acid very readily. Is not the purification of mariners' clothes, in this manner, a circumſtance of weight, to evince the decompoſition of the ſeptic acid they contain, by the ſaccharine ingredient of the molaſſes?

" Such is the detail of the principal conſtituent parts of that naſtineſs which accumulates on the ſkins and in the garments of human beings; and ſuch the theory of the operation of alkalies &c. in making them clean. From a compariſon of the facts relative to *perspiration* with thoſe which reſpect *urine*, it will readily appear, that the two fluids very much reſemble each other, as might naturally be ſuppoſed from the great connection there has been long known to exiſt between the two diſcharges. What is, therefore, true of the one, is, to moſt purpoſes, applicable to the other. In particular, the ſweat as well as the urine contains *septon*, which often combines with oxygen, and forms that noxious compound, *septic acid*.

" Yet it muſt be remembered, that as extractive matter and acids are capable of ſolution in mere water, and require not the aid of alkalies to detach them, that waſhing the cuticle in cool, or, more readily, in warm water, removes every thing but the greaſe, and even looſens or liquefies a part of that. Water cleanſes the cuticle or a ſhirt by exerting a greater attraction for the foul material ſticking to them, than the ſkin or a garment does. For this purpoſe the water muſt be clean, or, at leaſt, leſs tainted than the ſubject intended to be purified. Upon the ſame principle that *water* or *alkaline ley* cleanſes the cuticle, a *clean ſhirt* will do the ſame; that is, by attracting or abſorbing from it ſomething foul or foreign. *Clean ſhirts, drawers*, and *ſtockings*, are, therefore, ſubſtitutes for *clean water:* and he who changes his linen very frequently, deterges the ſurface of the body *almoſt* as much as by bathing; and, per-

haps, for the purposes of health, *quite* as much. This appears to be more certainly the case, because, after washing in soap-suds, a portion of alkali adheres to the cloth, unless it be well rinsed, and is instantly ready to exert its neutralizing effect. A dry shirt, thus washed, may be conceived as besprinkled with innumerable minute crystals of potash and soda.

" Pathologists have observed that *acid sweats* have sometimes occurred. In these cases an accescent dispositon, or acid acrimony present in the blood, at the critical period of fevers, and at other times, may tincture the fluids secreted in the vessels of the skin with some of their peculiar qualities. This has been alleged to have taken place to so high a degree as to turn *blue* litmus-paper to a *red*. It is not material to my argument whether this happens frequently or never. It is enough for my purpose that the liquids excreted on the cuticle have a tendency to become acid, *after* being deposited there. If *acid secretions* ever happen, they exhibit a stronger case, and illustrate the doctrine with additional force.

" II. Another general property of these vitiated or corrupted animal excretions is to rot the cloathing to which they adhere, and cause it to wear out the faster A shirt, indeed, worn until its threads are fully impregnated with foulness, requires so much soaking and friction, while in the wash, that there can be no wonder if, in the operations of being made clean, it is almost wrung or rubbed to pieces. But, independent of all this, it is well known that linen, and cloathing of all kinds, become very remarkably weaker by lying and remaining long in their dirt, without being ever handled by the laundress. There may be such a collection and concentration of animal matter, as not only to rot the cloth, but to convert it to an infectious fomes, and make it diffuse pestilential vapours around. Garments, too long worn, without being cleansed from time to time, often grow *rotten* and *infectious* as they grow *nasty*. Alkalies remove the nastiness, and, if applied discreetly, in season, prevent the rottenness, and check the infection. Every day's experience demonstrates their efficacy in these processes. The following fact may serve as an exemplification of a very common occurrence: A gentleman, in the time of war, was taken captive, and compelled, by the enemy, to march on foot a great distance, at a violent rate, during very hot weather. He sweated most profusely. At the end of the march he was confined in prison, and treated with great rigour. Being deprived of changes of raiment, and of the means of keeping himself clean, his shirt, in a short time after his confinement, became rotten, and he fell sick of a fever. In this instance, no doubt, both the cuticle and shirt became impregnated

ted with *septic poison*, manufactured from the *sweat*, from which both the *constitution* and the *clothing* were the sufferers. In this way the American and British sailors, who visit the West-Indies, *catch yellow fevers*, as they are called, without once going on shore, or having any communication with infected persons. Numberless facts prove that, even in the harbours, these fatal distempers are not *introduced from on shore, but bred and supported on board the vessels themselves*, in which the people fall sick, whence they are carried on shore to be cured.

" III. A third general effect of these septic productions, as was observed in the preceding paragraph, is *to injure the constitution*. This they do in two ways: 1. By a direct stimulant operation upon the part of the *true skin* to which they are applied, causing different forms of tinea, herpes, psora, elephantiasis, petechial and miliary eruptions, &c. &c. and, 2. By a direct stimulant operation upon the heart and sanguiferous vessels, after they are conveyed thither through the absorbents arising from the cuticular surface, causing various grades of febrile disturbance, of the intermittent, remittent, and continued forms, and inducing distempered motions in the lymphatic system, as they pass through its branches. All examiners of this subject should, however, recollect, that septic fluids, though they exist on the cuticle and in the blood-vessels, do not always stir up diseases; for the constitution may be, and frequently is, in such a state as to resist their tendency to produce morbid action; the reason of which seems to be, that the stimulus no longer irritates a constitution which is seasoned or habituated to it.

" IV. A fourth general property of these fluids, engendered in corruption, is to be volatilized by the heat of summer and autumn in the United States. The noxious quality of the vapours proceeding from putrefying collections of common animal matter is too well known to require mentioning in this place. When that other animal matter which constitutes perspiration and sweat, and accumulates in the cuticle and clothing to large amount, has undergone the changes to which it is prone, it is much disposed to assume the aërial form. Some portions of these exhaling vapours are often pungent, active, and of a deleterious quality. They are produced, generally speaking, not in the circulating blood, nor during the process of secretion, but *after their* deposition upon the cuticle and clothes, and aided by HEAT and MOISTURE, through a process similar to that which converts urine, and several other excrementitious substances, into offensive and noxious airs.

" Clothing, or merchandize of any kind, wherein noxious airs or fluids of the septic kind are generated or accumulated,

is called a FOMES. In this way bills of paper-money passing frequently from man to man, and becoming tainted with every thing that human hands can impart to them, have, in the city of New-York, degenerated to a *fomes*. So the shoes and stockings of that unclean person who suffers septic acid so to accumulate about the toes and feet as to eat away the cuticle to the quick, may become a *fomes*. In like manner a seaman's chest of dirty clothes, tainted with all kinds of animal exudations, may, during a voyage from Cape-Françoise to New-York, turn to a *fomes*, though not a particle of infection was borrowed from the atmosphere of St. Domingo, or from any person living or dying in it. By a process in no wise different, do feather beds, and beds of all kinds, that have been long laid upon, and thereby become thoroughly impregnated with perspirable and other matter, acquire their unwholesome qualities, and turn to a *fomes*. Just thus are clothes charged with perspirable and other excrementitious matter, discharged from the bodies of prisoners in jail, and of other persons living in foul and confined places, converted to venom and pestilence, or to an infectious or contagious *fomes*. And it is not impossible that a bale of cotton, or any similar material, may, by impregnation with animal matter, become a repository of mischief, and a *fomes*.

" In the preceding paragraph I have introduced the word " fomes" as often as I conveniently could; and have done so that I might shew the impropriety of the term, and offer my objections to it. The *literal* meaning of *fomes*, in Latin, refers to that quality, in bodies, which makes them catch and retain fire very readily; such as punk, tinder, lint-stock, and touch wood (rapuitque in *fomite* flammam—Virg. Æneid i. v. 180; in the note to which, in the Dauphin's edition, may be seen a blunder of the critics) ACHATES used a *fomes* when he struck fire with flint, &c. *Metaphorically*, it denotes an incentive or motive to any action. While the belief prevailed, that infection was carried from place to place, like a fire-brand, and passed from person to person, like a spark, the word " fomes" was borrowed to express, by a strong and illustrative figure, the analogy between the supposed effects of fire and those of pestilence. As each of the substances just named was a fomes of fire, so a chest of clothes, a blanket, a bed, or a bale of merchandise, was a fomes of pestilence. This mode of expression was thought to be highly philosophical and correct; insomuch, that when any one affirmed that an atom of contagious matter, received into a blanket, multiplied itself as a spark of fire enlarges in a tinder box, he was thought to express himself sensibly.

" But

" But it will appear, to any one who comprehends the preceding obfervations, that the fimile, if it be intended for a fimile, is imperfect; or the metaphor, if it is meant for a metaphor, is deceitful: for it has been fhewn, that the thing called a *fomes* produces peftilential matter without having a particle of infection (like a fpark of fire, or even a bit of leaven) introduced into it from without; and it follows, of courfe, that all figurative expreffions, calculated to uphold the idea *of foreign introduction* of common peftilential matter, and its *derivation ab extrà*, are highly conducive to the continuance and propagation of error. It is high time this form of fpeech was difcontinued. This figurative expreffion itfelf, and the unhappy aflociation of ideas which fprings from it, are the caufe of a large proportion of the wrong-headednefs now prevalent, concerning the diftempers called infectious.

" Was not the malignant fever, or plague, which deftroyed a great proportion of one thoufand nine hundred and forty-fix convicts, on board the hulks in the Thames, (Colquhoun's Police of the Metropolis, chap. xii. p. 307) generated in the veffels? And were there not local caufes enough to excite it, without the importation and introduction of a fomes? Did not the peftilential diftemper which afflicted the Spanifh captives at Winchefter arife within the walls of their prifon, independent of any fomes introduced from without? Was not Hofier's fquadron, during the unfortunate expedition againft Porto-Bello, difmally difabled by a diftemper, bred on board and within the fhips, wholly unaided by any thing like a fomes? And, if it was not fuperfluous, I would afk, whether malignant diftempers did not harrafs, with their vifitations, almoft all the great cities of Europe, and, indeed, of the world, until, by enforcing fufficient laws againft nuifances, their inhabitants removed the caufes?

" In all thefe inftances, dreadful as fome of them were, the caufes of the diftempers were engendered or manufactured on the fpot. Thefe exciting caufes were, in all, exactly fimilar to that which dirties a fhirt, or the commoneft article of clothing. If there is any difference of moment, it is nearly this: in one cafe peftilence is manufactured upon a *great* fcale, and, in the other, upon a *fmall* one. The fame principle pervades both cafes. The laws of Nature operate uniformly in both: *and the fame means that will cleanfe a fhirt, will purify a fhip or a jail.* Subftances that fubdue acids, fuch as OILS, CALCAREOUS EARTH, AND SOLUTIONS OF ALKALINE SALTS, CAN ACCOMPLISH THE WORK.

" And if I interpret right that accurate mineralogift FERBER, (Travels through Italy, letter xi. p. 129, edit. by Raſpe) the

the catacombs, near the cities of Naples and Rome, are cut through and into masses of *tufo-stone*. This seems to consist chiefly of volcanic ashes, hardened into a substance of sufficient compactness, in many cases, for building: and those afforded by Vesuvius, whether grey, white, brown, or yellowish, contain *alkaline* or *calcareous* particles enough to effervesce with acids. Hence the preservation of human bodies in those subterranean chambers can be easily accounted for. The lime preserved these as the soda preserved the mummies. SPALLANZANI has accounted for the presence of this alkaline matter. In his very interesting travels, (Viaggi alle due Sicilie, &c. Pavia, 1792) he affirms, that a large tract of the Appenines, and the substratum of the volcanic country about Naples, consist of the *carbonate of lime*. (tom. i. p. 109—114) And as he has shewn that sundry volcanic productions, particularly the vitrified lavas of the Lipari Islands, contain *muriatic acid*, (tom. iii. p. 351) which, he thinks, is derived from the decomposition of *common salt*, (p. 361) *veramente del mare istesso penetrante per di sotto i monti volcanici*, penetrating from the sea itself, beneath volcanic mountains, does it not follow, that its *soda* must be combined with other fossils, and, perhaps, with the tufo?

"There has been a number of tolerable conjectures on the precise nature of pestilential matter. Besides those I have mentioned in other essays, I refer you now to the *Loimologia* of HODGES, a physician who resided in the city of London during all the time of the plague of 1665. Observe how well he has guessed. In his § 1, on the Cause of a Pestilence and a Contagion, he considers it as "arising chiefly from a change or corruption of the *nitrous spirit* in the air." (p. 32 and 37) The *nitrous spirit* of this writer, as well as of his countryman and predecessor MAYOW, was evidently *vital* or *oxygenous air*; and, by its change or corruption, may be obviously understood, a combination of it with septon, the principal of putrefaction, or azote, the element hostile to life. To this change in the nitrous principle, Hodges ascribes "blasts upon trees and diseases among cattle," as well as a pestilence among mankind, (p. 41); and to somewhat of *an acid*, sometimes produced in this way, he attributes the quality of rain-water to stain the clothing and skins of travellers in the equatorial regions of Africa, and "burn upon them, as it were pestilential characters." (p. 42) He affirms, too, what I have often witnessed, that there is a great similitude between a pestilence and a scorbutic habit, (p. 46); and declares, (p 49) that the convulsions and vellications of the stomach and alimentary canal are not owing to a putrefaction of

of bile, nor an eruption of fire, as the manner of thinking then was, but to this "vitiated ſaline ſpirit." This author makes favourable mention (p. 171) of ſpirit of hartſhorn, (ammoniac) given in doſes of two ſcruples and one drachm.

"I ſhall, however, reſt the argument here for the preſent. If the reaſoning advanced eſtabliſhes the principle, then the principle ſo eſtabliſhed may be employed to explain innumerable other facts in Nature belonging to this head. Your ſagacity will judge both of the rule and its application.

"Be aſſured I am yours,

"With high conſideration and reſpect,

"SAMUEL L. MITCHILL."

On the GALVANIC ELECTRICITY.

SINCE the account of the extenſion of Galvani's experiments, given at one of Sir Joſeph Banks's meetings, and ſoon after by Dr. Garnet at the Royal Inſtitution, we have been very deſirous of preſenting our readers with an accurate ſtatement of what is now known on that curious and intereſting ſubject. Mr. Nicholſon's Philoſophical Journal for July, furniſhes us with the moſt authentic means.

The 9th article of that number is intitled, "*Account of the new Electrical or Galvanic Apparatus of Sig.* ALEX. VOLTA, *and Experiments performed with the ſame.*

"From motives of delicacy," ſays Mr. Nicholſon, "to the inventor of the moſt curious and important combination hereafter to be deſcribed, I forbore giving an account of its conſtruction and effects in the laſt number of this Journal, though it has now been a ſubject of great attention among philoſophers for near two months. It appeared proper to avoid the publication of facts, originally flowing from the liberal communication of the worthy preſident of the Royal Society, until the paper of the inventor had been read to that learned body; and this could not be done till very lately, becauſe the latter part of his memoir did not arrive till long after the firſt four pages.

"The Right Honourable Sir Joſeph Banks, Bart. P. R. S. having favoured my friend Anthony Carliſle, Eſq. with the peruſal and conſideration of theſe four pages at the latter end of laſt April, I had the pleaſure to look them over with him, immediately after which he conſtructed an inſtrument according to Sig. Volta's directions. The experiments made with this

this will form part of the preſent communication; but in the firſt place, I ſhall endeavour to relate the leading particulars of the communication made to the Royal Society, which no doubt will hereafter appear at large in their Tranſactions.

" The portion of letter which firſt arrived from Sig. Volta, is dated from Como in the Milaneſe, March 20, 1800. This, together with the ſubſequent parts, contains a detailed account of the inſtrument, of which the following is one of the moſt convenient forms.

" Take any number of plates of copper, or, which is better, of ſilver, and an equal number of tin, or which is much better, zinc, and a like number of diſcs, or pieces of card, or leather, or cloth, or any porous ſubſtance capable of retaining moiſture. Let theſe laſt be ſoaked in pure water, or which is better, ſalt and water, or alkaline lees. The ſilver or copper may be pieces of money. Build up a pile of theſe pieces; namely, a piece of ſilver, a piece of zinc, and a piece of wet card: then another piece of ſilver, a piece of zinc, and a piece of wet card: and ſo forth, in the ſame order (or any other order, provided the pieces ſucceed each other in their turn) till the whole number intended to be made uſe of is builded up. The inſtrument is then completed.

" In this ſtate it will afford a perpetual current of electricity, through any conductor communicating between its upper and lower plates; and if this conductor be an animal, it will receive an electrical ſhock as often as the touch is made, by which the circuit is completed. Thus, if one hand be applied to the lower plate, and the other to the upper, the operator will receive a ſhock, and that as often as he pleaſes to lift his finger and put it down again.

" This ſhock reſembles the weak charge of a battery of immenſe ſurface, and its intenſity is ſo low, that it cannot make its way through the dry ſkin. It is, therefore, neceſſary that a large ſurface of each hand ſhould be well wetted, and a piece of metal be graſped in each, in order to make the touch, or elſe that the two extremities of the pile ſhould communicate with ſeparate veſſels of water, in which the hands may be plunged.

" The commotion is ſtronger the more numerous the pieces. Twenty pieces will give a ſhock in the arms, if the above precautions be attended to. One hundred pieces may be felt to the ſhoulders. The current of electricity acts on the animal ſyſtem while the circuit is complete, as well as during the inſtant of commotion, and the action is abominably painful at any place where the ſkin is broken.

" That the energy of the apparatus is the effect of an electric

tric ſtream or current, is proved by the condenſer with which Sig. V. aſcertained the kind of the electricity and obtained its ſpark. He finds the action ſtrongeſt, or moſt pungent, on wounds on the minus ſide of the apparatus, or where the wounds give out electricity, a fact alſo obſervable in the common electric ſpark.

" The theory of the learned inventor, if I rightly apprehend him, is, that it is a property of ſuch bodies as differ in their power of conducting electricity, that when they are brought into contact they will occaſion a ſtream of the electric matter. So that if zinc and ſilver be made to communicate immediately by contact, there will be a place of good conducting energy; and if they be made to communicate mediately by means of water, there will be a place of inferior conducting energy: and wherever this happens there will be a ſtream or current produced in the general ſtock of electricity. This is not deduced as the conſequence of other more ſimple facts; but is laid down as a general or ſimple principle grounded on the phenomena.

" As the current of electricity will be reſiſted by the different conductors, he remarks that the metals may touch in a ſingle point, or be ſoldered together; but that the humid ſurfaces muſt be more extended.

" By many experiments, he finds that the conſequences are the ſame, whether the zinc and ſilver touch each other, or whether the communication be made by ſeveral different metals, provided the water be in contact with the zinc and the ſilver only.

" Where zinc is uſed, ſalt water is preferable to alkaline lees, but the contrary when tin is made uſe of inſtead of the zinc.

" The effect is much increaſed by elevation of temperature.

" He was ſurpriſed to find that the Galvanic flaſh of light was no greater with this apparatus than with a pair of plates; but is was produced when the conductor of the circuit was applied to any part of the face, or even to the breaſt. The ſtrongeſt action was when the touching plate was held between the teeth, ſo as to lie upon the tongue. In this caſe the lips and tongue were convulſed, the flaſh appeared before the eyes, and the taſte was perceived in the mouth.

" Two blunt probes were inſerted in the ears, and the ſhock paſſed through the head, after which the communication was kept up. A peculiar ſound, like crackling or boiling, was heard; but the author did not think it prudent to make this experiment repeatedly.

" The ſenſe of ſmell could not be excited, becauſe, as Sig. V. remarks, this electricity cannot be made to diffuſe itſelf in the air.

" As the diſcs become dry, and loſe their power, Sig. V. endeavoured to prevent this effect by incloſing the column in wax or pitch, and in this he has ſo far ſucceeded, that he has fitted up two colums of twenty pieces each, which have acted well for ſome weeks, and he hopes will for months.

" The combination, which he thinks the moſt inſtructive, conſiſts of a row of glaſſes or cups (not of metal) containing warm water or brine. Into each of theſe is plunged a plate of zinc and another of ſilver, not touching each other. From theſe plates reſpectively proceed tails or prolongations, which communicate with or touch the plates of the outer glaſſes in ſuch a manner, that the zinc of the firſt cup communicates with the ſilver of the ſecond; the zinc of the ſecond with the ſilver of the third; the zinc of the third, &c. progreſſively and regularly through the whole row. The communication between the firſt and laſt glaſſes gives the ſhock, &c. The plates in the fluid are directed to be about an inch ſquare; but the contacts above the water may be as ſmall as the operator pleaſes.

" Sig. Volta makes honourable mention of my conjectural theory of the torpedo. After remarking that my inductions were the moſt probable that the exiſting theory of electricity could at that time afford, he proceeds to make various objections, needleſs to be here detailed, and then offers his own new and ſtriking apparatus as more nearly reſembling the torpedinal organ. I need not anticipate the reader in the happy points of reſemblance between their ſtructure and effects.

" Thus far," ſays Mr. Nicholſon, " I have followed this able philoſopher; who, to his former reſearches into the nature and laws of electricity, has now added a diſcovery which muſt for ever remove the doubt whether Galvaniſm be an electrical phenomenon. But I cannot here look back without ſome ſurprize, and obſerve that the chemical phenomena of Galvaniſm, which had been ſo much inſiſted on by Fabbroni, more eſpecially the rapid oxydation of the zinc, ſhould conſtitute no part of his numerous obſervations.

" On the 30th of April, Mr. Carliſle had provided a pile conſiſting of ſeventeen half crowns, with a like number of pieces of zinc, and of paſteboard, ſoaked in ſalt water. Theſe were arranged in the order of ſilver, zinc card, &c. which order I ſhall denote by ſaying, that the ſilver was undermoſt, that is to ſay, under the zinc; and I make this remark becauſe ſome philoſophers have uſed the expreſſion that the ſilver was undermoſt

undermoſt when they uſed the order of ſilver, card zinc, &c. which, as the reader will eaſily perceive, is contrary to the order here ſpoken of. This is of no conſequence to the effect, though it is material to a clear underſtanding of the terms we uſe. This pile gave us the ſhock as before deſcribed, and a very acute ſenſation wherever the ſkin was broken. Our firſt reſearch was directed to aſcertain that the ſhock we felt was really an electrical phenomenon. For this purpoſe the pile was placed upon Bennett's gold leaf electrometer, and a wire was then made to communicate from the top of the pile to the metallic ſtand or foot of the inſtrument. So that the circuit of the ſhock would have been through the leaves, if they had diverged. But no ſigns of electricity appeared. Recourſe was then had to the revolving doubler, deſcribed at page 95 of our preſent volume. The plate A was connected with the top of the electrometer and the ſilver end of the pile; and the plate B and ball were made to touch the top of the ſyſtem by an uninſulated braſs wire. The doubler had been previouſly cleared of electricity by twenty turns in connection with the earth. The negative divergence was produced in the electrometer. Repeated experiments of this kind ſhewed that the ſilver end was in the minus, and the zinc end in the plus ſtate.

" In all theſe experiments it was obſerved, that the action of the inſtrument was freely tranſmitted through the uſual conductors of electricity, but ſtopped by glaſs and other non-conductors. Very early in this courſe, the contacts being made ſure by placing a drop of water upon the upper plate, Mr. Carliſle obſerved a diſengagement of gas round the touching wire. This gas, though very minute in quantity, evidently ſeemed to me to have the ſmell afforded by hydrogen when the wire of communication was ſteel. This, with ſome other facts, led me to propoſe to break the circuit by the ſubſtitution of a tube of water between two wires. On the 2d of May we, therefore, inſerted a braſs wire through each of two corks inſerted in a glaſs tube of half an inch internal diameter. The tube was filled with New River water, and the diſtance between the points of the wires in the water was one inch and three quarters. This compound diſcharger was applied ſo that the external ends of its wire were in contact with the two extreme plates of a pile of thirty-ſix half crowns with the correſpondent pieces of zinc and paſteboard. A fine ſtream of minute bubbles immediately began to flow from the point of the lower wire in the tube, which communicated with the ſilver, and the oppoſite point of the upper wire became tarniſhed, firſt deep orange, and then black. On reverſing the tube, the gas came from the other point, which was now low-

eſt, while the upper in its turn became tarniſhed and black. Reverſing the tube again, the phenomena again changed their order. In this ſtate the whole was left for two hours and a half. The upper wire gradually emitted whitiſh filmy clouds, which, towards the end of the proceſs, became of a pea green colour, and hung in perpendicular threads from the extreme half inch of the wire, the water being rendered ſemiopaque by what fell off, and in a great part lay, of a pale green, on the lower ſurface of the tube, which, in this diſpoſition of the apparatus, was inclined about forty degrees to the horizon. The lower wire of three quarters of an inch long, conſtantly emitted gas, except when another circuit, or complete wire, was applied to the apparatus; during which time the emiſſion of gas was ſuſpended. When this laſt mentioned wire was removed, the gas re-appeared as before, not inſtantly, but after the lapſe of four beats of a half ſecond clock ſtanding in the room. The product of gas, during the whole two hours and a half, was two-thirtieths of a cubic inch. It was then mixed with an equal quantity of common air, and exploded by the application of a lighted waxed thread.

" It might ſeem almoſt unneceſſary to have reverſed the order of the pile in building up, as reverſing the tube muſt have anſwered exactly the ſame purpoſe. We choſe, however, to do this, and found that when the zinc was at the bottom, its effects were reverſed, that is to ſay, the gas ſtill came from the wire communicating with the ſilver, &c.

" We had been led by our reaſoning on the firſt appearance of hydrogen to expect a decompoſition of the water; but it was with no little ſurprize that we found the hydrogen extricated at the contact with one wire, while the oxygen fixed itſelf in combination with the other wire at the diſtance of almoſt two inches. This new fact ſtill remains to be explained, and ſeems to point at ſome general law of the agency of electricity in chemical operations. As the diſtance between the wires formed a ſtriking feature in this reſult, it became deſirable to aſcertain whether it would take place to greater diſtances. When a tube three-quarters of an inch in diameter, and thirty-ſix inches long, was made uſe of, the effect failed, though the very ſame wires, inſerted into a ſhorter tube, operated very briſkly. The ſolicitation of other objects of enquiry prevented trial being made of all the various intermediate diſtances; but from the general tenor of experiments, it appears to be eſtabliſhed, that this decompoſition is more effectual the leſs the diſtance between the wires, but that it ceaſes altogether when the wires come into contact.

" May 6.—Mr. Carliſle repeated the experiment with copper

per wires and tincture of litmus. The oxydating wire, namely, from the zinc ſide, was the loweſt in the tube; it changed the tincture red in about ten minutes as high as the upper extremity of the wire. The other portion remained blue. Hence it ſeems either an acid was formed, or that a portion of the oxygen combined with the litmus, ſo as to produce the effect of an acid.

" It may be here offered as a general remark, that the electric pile with card, or with woollen cloth, continues in order for about two days, or ſcarcely three; that from a ſeries of glaſſes ſet up by Mr. Carliſle, as well as from the pile itſelf, it appears that the ſame proceſs of decompoſition of water is carried on between each pair of plates, the zinc being oxyded on the wet face, and hydrogen given out; that the common ſalt is decompoſed, and exhibits an efflorescence of ſoda round the edges of the pile, extruded, moſt probably, by the hydrogen: and that on account of the corroſion of the faces of the zinc, it is neceſſary to renew them previous to each conſtruction of the pile. This may be done by ſcraping or grinding. I found it moſt convenient to lay the piece in a hole in a board, and give it a ſtroke with a float file, or file of which the teeth are not croſſed. It might, perhaps, be leſs troubleſome to clean them with diluted muriatic acid; but this I have not tried.

" As the ample field of phyſiological reſearch to which Mr. Carliſle's attention is directed, and the multiplicity of my own avocations, rendered it leſs convenient for us to purſue our enquiries together, I conſtructed an apparatus for my own uſe. Zinc was laminated to the twenty-fourth part of an inch in thickneſs, and pure ſilver to the one-thouſandth part of an inch, that is to ſay, as thin as our flatting mills can bring it.

" Of theſe metals I made two ſets, namely, ſixteen pieces of ſilver of two inches in diameter, and ſixteen pieces of 1.8 inch diameter, with their correſpondent plates of zinc and wetted card. The ſmall pile was firſt prepared, and whether it were that theſe thin pieces were more diſpoſed to admit the water between the metallic faces of contact, or from whatever other cauſe it may have ariſen, it did not appear by any experiment, that the whole ſet, though ſo greatly exceeding the pile of half-crowns in ſurface, was capable of doing more in the decompoſition of water, or in communicating the ſhock. But this, with other facts, ſeems to ſhew, that the repetition of the ſeries is of more conſequence to this action, than the enlargement of ſurface; and alſo that the thickneſs of the plates, though it may be attended with convenience, moſt probably affords no addition to the force. I muſt alſo add, that I have no reaſon to recommend my pile, though at firſt ſight it ſeemed

to

to poſſeſs cheapneſs and convenience. The plates of zinc are too thin to bear frequent cleaning or renewing after corroſion of the ſurface, and the ſilver, though it is ſcarcely acted on in this ſituation, is too thin to be conveniently wiped or handled.

"The ſpontaneous electricity of the doubler preſented an objection to the ſtrict fidelity of its reſults; whence I thought it deſirable to give my pile a trial with the condenſer. The foot or ſtand of my electrometer is a braſs plate truly flat, and 3.8 inches in diameter. A piece of thin Perſian ſilk was tied ſmoothly upon the face of this plate, and it was then placed upon another braſs plate, upon which it was moved about horizontally, in order to accumulate electricity by friction; the electrometer itſelf being uſed as the handle by graſping the top. It was found that this treatment produced very weak ſigns of electricity when the electrometer was lifted up. The lower braſs plate was then placed on the top of the ſmall pile, and the condenſing electrometer placed upon it. A communication was then made, by means of a wire from the lower or ſilver end of the pile to the upper plate of the condenſer, or foot of the electrometer. In this ſituation it is evident, that the charge of the pile was employed in producing oppoſite ſtates of electricity in the condenſor, which would be ſhewn when the plates came to be ſeparated. The wire of communication being taken away, the electrometer was lifted, and the leaves diverged and ſtruck. It became neceſſary, therefore, to repeat the experiment, taking care to lift the electrometer more gradually. The divergence took place as before, and it was increaſed by preſenting excited ſealing wax towards the bottom of the electrometer. And as the top of the pile had by compenſation diminiſhed the ſame divergence, it is clear that the electricity of the top of the pile, *viz.* of the zinc, was contrary to that of ſealing wax; that is to ſay, the zinc was in the plus ſtate. After a number of repetitions of this experiment with the ſame invariable reſult, the pile was then carefully overſet, without diſturbing the relative arrangement of its parts; ſo that the zinc was now at the bottom, and the ſilver at the top. The electricity of the ſilver was then tried a number of times, by preciſely the ſame proceſs as before, and it exhibited an equal degree of intenſity, but it was minus or negative. In one of theſe experiments, I certainly ſaw the ſpark at the time of completing the circuit, and afterwards with the ſame pile, when I was expreſſly looking for it. But it is leſs neceſſary to dwell on theſe facts, as the ſtronger combinations have exhibited this effect with much greater perſpicuity.

"The decompoſition of water, and oxydation of metallic wire,

wire, gave birth to a variety of ſpeculations and projects of experiments. Among others it became a queſtion, what would be the habitude of metals of difficult oxydation. Two wires of platina, one of which was round, and one-fortieth of an inch in diameter, and the other nearly of the ſame maſs, but flatted to the breadth of one twenty-fifth of an inch, were inſerted into a ſhort tube of a quarter of an inch inſide diameter. When placed in the circuit, the ſilver ſide gave a plentiful ſtream of fine bubbles, and the zinc ſide alſo a ſtream leſs plentiful. No turbidneſs nor oxydation, nor tarniſh appeared, during the courſe of four hours continuance of this operation. It was natural to conjecture, that the larger ſtream from the ſilver ſide was hydrogen, and the ſmaller oxygen. Thick gold leaf was tried with the ſame effects. A wire of braſs was then ſubſtituted inſtead of one of the ſlips of gold. When the braſs was on the minus, or ſilver ſide, the two gaſes were extricated for two hours, without oxydation as before; but when the braſs was, by reverſing the tube, brought to the plus ſide, it became oxyded in the ſame manner as if both the wires had been braſs. When the ſlips of gold were long ſubjected to this action, the extremity of the ſlip communicating with the zinc, acquired a coppery or purpleiſh tinge, which was deepeſt near the end. Whether this aroſe from oxydation of the gold, or of the copper, of which gold leaf contains about a ſeventieth part, cannot from this experiment be decided.

" The ſimple decompoſition of water by platina wires without oxydation, offered a means of obtaining the gaſes ſeparate from each other. With this intention, Mr. Carliſle's pile of thirty-ſix was combined with my two ſets of ſixteen repetitions. His pile was built with the zinc uppermoſt, and mine in the reverſe order; ſo that by connecting the upper plates the whole conſtituted one range, and the communications could be made from the bottom of the one to the bottom of the other. The two platina wires were made to protrude out of two ſeparate tubes, each containing a little water, and through the oppoſite corks of each were paſſed copper wires of communication. Theſe tubes were ſlightly greaſed on the outſide to prevent their becoming damp; and in this ſtate the extremities, armed with the platina, were plunged in a ſhallow glaſs veſſel of water, in which two ſmall inverted veſſels, quite full of water, were ſo diſpoſed, that the platina of one tube was beneath one veſſel, and the platina of the other tube was beneath the other, the diſtance between their extremities being about two inches. The copper wires of theſe tubes reſpectively were made to communicate with the extremities of the intire pile of ſixty-eight ſets. A cloud of gas aroſe from each wire,

but

but moſt from the ſilver, or minus ſide. Bubbles were extricated from all parts of the water, and adhered to the whole internal ſurface of the veſſels. The proceſs was continued for thirteen hours, after which the wires were diſengaged, and the gaſes decanted into ſeparate bottles. On meaſuring the quantities, which was done by weighing the bottles, it was found, that the quantities of water diſplaced by the gaſes, were reſpectively, 72 grains by the gas from the zinc ſide, and 142 grains by the gas from the ſilver ſide; ſo that the whole volume of gas was 1.17 cubic inches, or near an inch and a quarter. Theſe are nearly the proportions in bulk of what are ſtated to be the component parts of water. The gas from the zinc ſide, being tried with one meaſure of nitrous gas, contracted to 1.25, and did not contract more by the addition of another meaſure; the gas from the ſilver ſide, by the ſame treatment, contracted to 1.6. The air of the room, on trial, contracted to 1.28. From the ſmallneſs of the quantity no attempt was made to detonate the air from the zinc ſide, but a portion of that from the ſilver ſide being mixed with one-third of atmoſpheric air, gave a loud detonation.

" Upon the above it may be remarked, that it does not ſeem probable that oxygen was afforded by both wires, but that they were mixed by the circumſtances of the experiment. For the gaſes being extricated in extremely minute bubbles beneath the inverted veſſels, cauſed a ſlow aſcending current conſiſting of water mixed with thoſe bubbles, many of which were undoubtedly too ſmall to be diſcerned. This aſcending current gave out as much of its gas at the top of the veſſel, as had time to conglomerate; but the extremely minute bubbles would return in the deſcending current, and be repeatedly carried up before this effect could take place. Such a continual circulation, or ſtream, the lower part of which paſſed down into the ſaucer, muſt at length have occaſioned the whole maſs of fluid to become replete with theſe minute bubbles, which would break at the open ſurface, and be loſt, or attach themſelves to the ſides of the veſſel, as was ſeen to be the caſe. What proportion may have thus diſappeared is uncertain; but it is highly probable, that one conſequence of the imperfections of our apparatus, was to occaſion both the inverted veſſels to become receptacles for the gaſes from both wires indiſcriminately; though moſt plentifully in each, from the wire immediately beneath its mouth. If this reaſoning may be admitted for the preſent, till the experiment is repeated in cloſed veſſels, it will be fair to reckon the whole diminution on both the quantities. The whole diminution was 1.15, whence it would follow,

follow, that the purity of the oxygen eſtimated in Prieſtley's manner, would be expreſſed by the number 0.85.

" On account of the length of this communication, I ſhall at preſent forbear to enter into any conſiderations of theory, but ſhall conclude with a conciſe mention of the effects of a pile of one hundred half crowns, and a chemical incident, which appears to be the moſt remarkable of thoſe which I have yet obſerved.

" The pile was ſet up with pieces of green woollen cloth ſoaked in ſalt water. It gave ſevere ſhocks, which were felt as high as the ſhoulders. The tranſition was much leſs forcible through a number of perſons, but it was very perceptible through nine. The ſpark was frequently viſible when the diſcharge was made in the dark, and a gleam of light was alſo, in ſome inſtances, ſeen about the middle of the column at the inſtant of the exploſion. The aſſiſtants were of opinion that they heard the ſpark.

" The extrication of the gaſes was rapid and plentiful by means of this apparatus. When copper wires were uſed for the broken circuit, with muriatic acid diluted with 100 parts of water in the tube, no gas, nor the leaſt circulation of the fluid was perceived, when the diſtance of the wires was two inches. A ſhort tube, with two copper wires very near each other in common water, was made part of the circuit, and ſhewed by the uſual phænomena, that the ſtream of electricity was rapidly paſſing. The wires in the muriatic acid were then ſlided within a third of an inch of each other. For the ſake of brevity, I avoid enumerating the effects which took place during ſeveral hours, and ſimply ſtate; that the minus wire gave out ſome hydrogen during an hour, while the plus wire was corroded, and exhibited no oxyde; but a depoſition of copper was formed round the minus, or lower wire, which began at its lower end: that no gas whatever appeared in this tube during two hours, though the depoſition was going on, and the ſmall tube ſhewed the continuance of the electric ſtream; and that the depoſition at the end of four hours formed a ramified metallic vegetation, nine or ten times the bulk of the wire it ſurrounded.

" In this experiment it appeared, that the influence of electricity increaſing the oxydability of the upper wire, and affording naſcent hydrogen from the lower, cauſed the latter to act as the precipitant of a ſolution of one and the ſame metal.

" We are in want of a meaſure of the intenſity of the action of theſe machines. Will this be derived from the quantities of water decompoſed, or of gas extricated under like circumſtances in given times? Or from any change of tem-

perature? Or what other commenſurate incident?—Mr. Carliſle has not found that the water in the tube, while under this agency, did produce the ſlighteſt effect on a very ſmall and delicate thermometer."

The next article contains, " *Some Experiments and Obſervations on Galvanic Electricity. By Mr.* W. CRUICKSHANK, *Woolwich. Communicated by the Author.*

" In ſubjecting a number of fluids to the action of Galvaniſm, ſeveral facts have been diſcovered, which to me, at leaſt, are perfectly new, and which appear to throw ſome light on the nature and powers of this new influence.

" I ſhall, therefore, without any further apology, give a brief detail of ſome of the moſt important, hoping that they may prove acceptable to thoſe who are employed in the ſame purſuits.

" I ſhall not give any particular account of the apparatus employed, being a pile, and not differing materially from that in uſe. I ſhall only juſt obſerve, that it conſiſted of plates of zinc and ſilver, of about 1.6 inches ſquare, and that the number of each employed in the following experiments varied from 40 to 100, according to the power required.

" I found that a ſolution of the muriate of ammonia anſwered better for moiſtening the interpoſed papers than common water.

" When the machine was in full action, ſparks, which were perfectly viſible in the day time, could be taken at pleaſure, by making a communication in the uſual way between the extremities of the pile, and a ſmall report or ſnap could be heard; the ſhock given at that time was very ſtrong, and a gold leaf electrometer, placed in the circle of communication, was very ſenſibly affected: theſe circumſtances, ſome of which I believe have been already aſcertained by Meſſrs. Nicholſon and Carliſle, ſhew the ſtrong reſemblance of this influence to electricity. Theſe gentlemen have likewiſe diſcovered that Galvaniſm decompoſes water with much greater facility than electricity, but with phenomena ſomewhat different."

Mr. Cruickſkank then enters upon an account of his curious experiments; for which, on account of the length of this article, we muſt refer our readers to Mr. Nicholſon's Journal.

To

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IN my communication for February laſt, I announced an intention of coming forward in the ſpring with an 'Eſſay on the general Properties of the Fox-glove.' I pledged myſelf likewiſe to notice ſome Strictures of Dr. Drake on a letter I addreſſed to you in Auguſt laſt. The preſſure of various avocations, however, have precluded me from fulfilling my engagements; but juſtice to myſelf, and to the cauſe I have eſpouſed, require I ſhould, without farther delay, perform the latter part of my intention.

When I firſt volunteered my ſervices on this important ſubject, I did ſo, as I imagined, with the view of ſupporting the credit and real character of my favourite plant. I had for ſome years reared it with attention in my garden, and brought it to a degree of perfection which I had never obſerved it to attain in the natural ſtate. My experience of its virtues in various diſeaſes was extenſive; and my ſucceſs in hydrothorax by means of a combination of this herb, with certain other means, (which ſhall in due time be laid before the public) was great; I had reaſon to believe, beyond any former example. I had recently uſed it in ſome caſes, (about twenty,) of conſumption; therefore when its merits, in this laſt diſeaſe, began to be publicly diſcuſſed, I fancied myſelf in ſome degree prepared to bear a part in the diſcuſſion; at leaſt, by adding my ſtock of facts and obſervations to the maſs of evidence already before the public.

But, in candidly and faithfully detailing the reſults of the trials I had made, I was concerned to find I muſt neceſſarily differ in many important points from the reſpectable authors who had recently gone before me. They held out the moſt ſanguine hopes of ſucceſs, and ſeemed already to congratulate themſelves, that an effectual remedy was at length diſcovered for that cruel ſcourge of mankind, conſumption; while I endeavoured to prepare the public mind for more moderate expectations. Moſt earneſtly do I wish their hopes had been realiſed, while mine proved otherwiſe. But, unfortunately for the human race, the reverſe has been the event; ſubſequent experience having fully confirmed the truth of what I then advanced.

It is proper to obſerve, however, that Dr. Beddoes, one of the authors alluded to, with a liberality characteriſtic of great minds, finding he had exceeded due bounds in his en-

comiums on the Fox-glove, evidently from the high colouring of his correſpondents, has qualified his original language in a ſecond edition of his excellent work on Conſumption; and it augurs rather unfavourably to ſee his active mind again in ſearch of a remedy for this ſtill too generally fatal diſeaſe.

I obſerve, likewiſe, the ſentiments of the Monthly Reviewers, in their candid, judicious, and impartial analyſis of every thing that has recently been written on this plant, accord fully with mine. Not ſo however, with Dr. Drake; whatever I have ſaid on the ſubject ſeems alike obnoxious to him: he not only objects to what I ventured to advance as facts, but repreſents me as diſcouraging the uſe of the Fox-glove from groundleſs fears of its deſtructive qualities. To him, therefore, permit me to addreſs a few lines, provided their inſertion in your truly valuable Journal be not likely in any degree to injure its juſtly-acquired reputation.

From the fortunate reſults of the two caſes publiſhed in the Contributions, &c. Dr. Drake thus concludes his encomium on the Fox-glove.

" I may, I think, without heſitation, affirm that the early exhibition of the *ſaturated* tincture in conſumption will in general prove ſucceſsful, and even when the diſeaſe is far advanced; provided the patient has but ſtrength enough left to endure a gradual depreſſion of the circulation, a reſult equally fortunate may be expected. That this can be done even in circumſtances of debility to an extent adequate to effect a cure, and without ſickneſs, languor, or loſs of appetite, the caſes appended will ſatisfactorily atteſt." *(Med. Contr. p. 487.)*

The principal grounds of my diſſent from this confident inference have already been ſtated. But this language, though ſtrong, fell far ſhort of that which was induſtriouſly promulgated by the Doctor's friends; and if my memory do not deceive me, by himſelf in a converſation we had twice on the ſubject. It had ſucceeded, it was urged, in every inſtance in which it was tried; and the moſt hopeleſs caſes were incapable of reſiſting its ſpecific powers. In vain did I aſſure them (his venerable predeceſſor Dr. Gibbon among the number) they deceived themſelves; that its powers were limitted even in the early ſtages of true conſumption. In anſwer to this it was ſaid, that I had been uſing the powder, from which, it was contended, " the wiſhed-for effect would ſeldom be produced." Every thing was to be effected by the wonder-working influence of the tincture: not even the tea of long life of St. Germain, the boaſted elixir of Caglioſtro, or the magnetic influence of Meſmer, were promiſed to atchieve more. But figure my aſtoniſhment on finding all the caſes in which it was ſaid to have

ſucceeded

ſucceeded dwindle away to two! I had myſelf been ſucceſsful in more than double the number; and I thought it now incumbent upon me to come forward, as well to prepare the public mind for what my experience enabled me to ſay it was really capable of performing, as to ſtate ſome particulars reſpecting its mode of preparation, exhibition, doſes, and effects, which appeared to have been overlooked, or imperfectly underſtood, and conſequently to have retarded the more general interdiction of this valuable herb. That I have done this has been productive of no regret to me. If I may be allowed to judge from the many private, and not a few public teſtimonies of approbation beſtowed upon my remarks, although uſhered into the world in the aukward and ungraceful dreſs too generally incident to haſty productions, I have reaſon to believe they have been favourably received by all except by Dr. Drake. For, ſays he, "ſome apprehenſions are nevertheleſs entertained that injury may accrue to medicine, from the reports already publiſhed in favour of this plant. Your Journal for Auguſt contains an ingenious communication" (a communication which I would ſay ought to be burnt by the hands of the hangman, if the Doctor's objections were well founded,) "from Dr. Maclean, of Sudbury; in which, however, notwithſtanding his own teſtimony to the good effects of the digitalis in conſumption," he concludes a paragraph, and commences another, in the following words:" "*I ſee*, ſays he, "*the moſt ſerious evils begin already to reſult from its not anſwering the high expectations that have been raiſed.*"—"*Others begin to loſe their confidence in it from ſimilar failures; whereas, had it been brought forward with its true character ſtamped upon it, this would not be the caſe.*" (*Medical and Phyſical Journal, vol.* ii. *p.* 417). And afterwards, "I may alſo with confidence affirm that no evil of any magnitude can ariſe from the uſe of Digitalis in tubercular conſumption, if properly exhibited, and that he who ſhall haſten to employ it early in the diſeaſe, will, in proportion to his promptitude, be a benefactor to mankind." And farther, "I am likewiſe well convinced that miſchief may, and will, probably be produced by an injudicious and indiſcriminate uſe of this active plant, &c." (p. 418).

I am really not ſolicitous to refute the imputations thus directly and obliquely conveyed, becauſe I am perſuaded, every one who has peruſed my remarks, and I am certain all thoſe who are acquainted with my ſentiments of the Fox-glove, will readily acquit me of them. Were it poſſible to attach ſuch an interpretation to my words, the teſtimony of every practitioner within the circle of my regular rides, and many beyond it, with whom I have occaſional intercourſe, would poſitively contradict

tradict it. For, whatever be the fate of this plant ultimately, the merit or demerit of bringing it into early and general use in this part of the country, I claim as attaching exclusively to me. I mean not, however, to infer that it had not been used by others before me; many had tried it in dropsy: but from want of success, owing to the causes already mentioned, I found it generally deserted; for when I fixed my residence in Sudbury, I recollect only two medical men who were in the habit of occasionally resorting to it; whereas, at this time, it is used by all, and this from a conviction of its extraordinary powers. And if the Doctor's scepticism in this respect be not invincible, he might easily persuade himself that my garden has liberally supplied the greater number with genuine leaves, not inferior in any degree to those of East Bergholt, where he loaded his botanical cart, and I may add, to those of any in the kingdom. Of this more hereafter. But, while the Doctor expresses his surprise that I do not assent to his conclusions respecting the almost specific virtues of the plant, in direct contradiction to my own experience, and, I venture to predict, to that of every man of extensive practice in this kingdom, he seems to have unluckily forgotten that he himself has, by a regular but insensible gradation, fallen into my opinion. "Of five cases," observes he, "of confirmed consumption, (including those of Grimes and Morris,) three have been perfectly cured. I have no expectation, however, that upon a larger scale the proportion of fortunate to fatal result, would be what my experience has given." *(ib.* 268.) And again, in his last communication, "The experience I have now had, indeed, thoroughly convinces me that the digitalis will be found adequate to the cure of several cases of tubercular consumption, though advanced into the second stage; that it will for a time suspend the progress of the symptoms in almost every instance; and that in catarrh, in hæmoptoe, and in vomica, it will in some measure approach to what is commonly implied by the term specific, &c." *(ib.* 417*)*. How different is this from the general tenor of the first paragraph transcribed! Had such language been originally used, the objections urged by me to this part of his Essay, would never have existed, because it would have accorded with the sentiments delivered by me some months before, as may be seen in pages 115, 116, and 117 of the Medical and Physical Journal, vol. ii. to which I beg leave to refer the reader. He will perceive, that instead of saying any thing adverse to the use of the Fox-glove in consumption, I strenuously recommended it as a remedy which I trusted would be found by others as it had been by me, "the most efficacious that had hitherto been resorted to," although experience taught me, "its powers were limitted in the

the early ſtage." (*p.* 115.) Yet while I earneſtly encouraged farther trials, I was ſolicitous to guard the unexperienced in its uſe againſt the obvious conſequences of ſuch exaggerated encomiums. I ſaid, that I ſaw "the moſt ſerious evils begin already to reſult from its not anſwering the high expectations that had been raiſed." I ſay ſo ſtill; and in all human concerns it muſt neceſſarily be ſo. When a character has been ſtamped upon any thing which experience contradicts, diſappointment, often diſguſt, follows; and ſuch is the force of prejudice, that it ſometimes ſinks beneath its real value. This has unfortunately been the fate of the Digitalis with many, eſpecially thoſe whoſe minds were impreſſed with the belief, that "the exhibition of the ſaturated tincture would in general prove ſucceſsful in conſumption." But if the Doctor has at length (ſome months after his firſt Eſſay appeared) fallen into my views, why expreſs his ſurpriſe at my rejecting from my creed, what he himſelf no longer believes? It was not to what he intended to ſay, write, or publiſh, that my objections were urged, but to what he had actually ſaid, written, and publiſhed. Although born, and my early days paſſed in a country where the belief in the ſecond ſight was general, I had not yet learnt that happy gift of ſeeing through the impenetrable veil which conceals futurity.

That the Fox-glove has fallen into much greater diſrepute in ſome parts of this country, in conſumption, than it really merits, not only from the cauſes which excited alarm in me, but from the failures of the Doctor himſelf, is a fact too well known; and it is now no leſs difficult to convince ſome of thoſe who perſuaded themſelves that every caſe of conſumption would give way to this medicine, that it will ſucceed in any caſe, than it was before that it would not always ſucceed.

In vomica too, as well as in conſumption, "in which," ſays the Doctor, "it will, in ſome meaſure, approach to what is commonly implied by the term ſpecific; a word, however, which," he thinks, "ſhould be baniſhed from medicine;" if he had but patiently awaited the reſults of a more enlarged experience, he would have been more humble in his expectations. In this I have done much good with the Fox-glove, probably more than it has yet fallen to his lot to do, unleſs he has a great deal in ſtore; but it has ſometimes failed me in caſes where I had reaſon to be ſanguine. In the caſe of a maiden lady, 41 years of age, it approached indeed to what might be termed a ſpecific. Miſs Harriſon had a vomica ſo extenſive as frequently to expectorate a quart of thick offenſive pus, ſometimes tinged with blood, in twenty-four hours. It was, at one time, not only combined with ſerous effuſion in the cavities of the cheſt,

cheſt, but with general anaſarca, and her ſtrength ſo far exhauſted as to preclude all hope of recovery. But ſhe ſurvived this formidable attack, and ſeveral others for the laſt two years, by the aid of the Fox-glove. Her conſtitution has been ſo much ſhattered, however, by theſe repeated attacks, that, as might naturally be imagined, ſhe ſeldom enjoys what may be termed *good* health. She always has a phial of the tincture, or pills made of the powder, in her poſſeſſion, to which ſhe is frequently obliged to reſort, and invariably with relief. Other auxiliaries were not at the ſame time loſt ſight of.

"Now," continues Dr. Drake, "in the Contributions the Digitalis is related to have been given with the view to cure *tubercular conſumption*; and if by experience it has been found beneficial in hæmoptoe, and ſpaſmodic aſthma, does it follow, that ſhould it fail in the former complaint, it muſt neceſſarily fall into diſrepute in the latter diſeaſes? Surely Dr. M. ſhould have treated with contempt thoſe who are weak enough to think and argue in this manner." *(ib.* 417, *et ſeq.)* Dr. D. has unfortunately committed an overſight here. The caſes publiſhed by him were, he tells us, of *tubercular conſumption:* to theſe only did my remarks apply; hence, as he has been refuting objections created by himſelf, I hope he is ſatisfied with his own refutation; I have even poſitively affirmed that "Digitalis will be found highly beneficial in aſthmatic affections." *(ib. p.* 117, *vol.* ii.*)* Applying them, however, to conſumption, as they were done by me, I ſuſpect not only thoſe reſpectable practitioners he politely adviſes me "to treat with contempt for being weak enough, &c." but every one of experience who will candidly decide on the merits of the Fox-glove, would be diſpoſed to retort the charge of credulous weakneſs upon himſelf, for promiſing general ſucceſs from a remedy he had uſed only in two caſes! (in a diſeaſe too which had hitherto very generally reſiſted all the efforts of art;) if he did not fall under the imputation of a violation of the rules of good manners.

To his objections to the proportions of leaves to ſpirituous menſtrua given by me, and the ſtrength of the tinctures thus drawn, I have already ſpoken, *(ib. vol.* iii. *p.* 152*)*. And as he has been ſilent in his laſt reply, this point may, I preſume, be conſidered as decided. I ſhall beg only to obſerve, that the term *ſaturated*, on which he dwells with ſo much emphaſis, and to which, he ſays, tinctures made with leſs proportions than one ounce of the dried leaves to five of proof ſpirit, "can offer no claim," was never uſed by me, becauſe I conſidered it a vague and unmeaning term, as applied by Dr. Darwin and him, having aſcertained by repeated trials, that what was *ſaturated* in one temperature

temperature of their tincture was not so in another, from the great deposition which took place. But if by the term *saturated*, be understood that property by which the spirit retains *permanently* a given quantity of the active parts of the leaf, in every variety of temperature in which it is likely to be placed, (not that by which it does so for a given time, and in a certain temperature only) the tinctures made agreeably to my formula, have, I think, a much stronger claim to it.

By digestion for a week or more, a very important object is gained; half the proportions of the leaf being sufficient; and a larger quantity of the tincture, of equal, more uniform, and permanent strength, being obtained.

For a digestion of twenty-four hours, there is no precedent in the Pharmacopeia of the learned Colleges of London or Edinburgh; undoubtedly, because experience taught them it was not sufficient time for the spirit to extract and retain the active parts of vegetables. By their decision, in regard to the formula submitted for their consideration, will I readily abide. I now conduct the digestion in a cool temperature, by which I find the tincture is still less liable to variation.

Ample experience now warrants me in repeating what I formerly said, (*ib.* p. 52) that I have not been able to exceed ninety drops in the day, except in the instance mentioned. I find sixty drops in twenty-four hours in general fully adequate to place the strongest habits under its influence, of which many examples shall in due time be given.

A young woman, who was last summer cured of consumption, and is at this time in perfect health, was nearly poisoned by 66 drops in twenty-fours. She began with 120 drops in a half pint saline mixture, accurately measured, of which two table spoonsful were taken three times a day. The quantity of tincture was gradually increased to 176 drops: Before she began the mixture which contained this quantity, her recovery was rapid, and the habit was sensibly under the influence of the medicine. The first few doses occasioned sickness and vomiting, yet she persisted until the whole was consumed. A female relation now came to me, to say she was dying, having retched and vomited incessantly for three days, and that she was now so bad and so faint, they could not keep life in her." By means of solid opium made into pills with confectio aromatica, (for every thing liquid was instantly rejected) warm anodyne embrocations, and an anodyne glyster, she was in a few days pronounced in safety, and a fortnight more completed the cure. The patient being at a distance from Mr. Rainbird, of Colne in Essex, (who attended with me,) and myself, she was rigidly enjoined to desist, as soon as the usual effects of the

medicine appeared, until ſhe heard from either of us; but, as too frequently happens, our injunctions were diſregarded. The tincture was of my own preparing.

In a variety of caſes of the moſt acute and painful ſuffering, which ſhall, I truſt, in due time be ſubmitted to public inſpection, I have ventured to preſcribe 30, 35, and at one time, 40 drops at a doſe; the two former repeated twice a day, and very generally with the happieſt effects. In ſome inſtances, the habit has, in a few minutes, felt its ſalutary influence; and in general, the ſtomach, pulſe, and head, have been affected in twenty-four and forty-eight hours. In urgent caſes, as relief muſt be ſpeedy, ſo the doſe muſt be large, and proportioned to the urgency of ſymptoms.

In formidable caſes of meaſles, when the urgency of the cough, the quick, difficult, anxious, or laborious reſpiration, with a high fever, denote a dangerous diſeaſe; eſpecially if from the hiſtory of the family there be reaſon to apprehend a ſcrophulous or phthiſical diatheſis, but in which blood-letting, or the exhibition of opium, may be thought equivocal or hazardous, I beg, in a particular manner, to direct the attention of medical men to full doſes of the Digitalis. In ſuch caſes, fever is allayed, expectoration and all the other ſecretions promoted, reſpiration relieved, and the bowels relaxed, by its means, whereas the very reverſe is frequently the conſequence of opium. Hence its ſuperiority in many inſtances.

In the firſt caſe of meaſles in which I preſcribed it, I had every reaſon to attribute the ſafety of the patient entirely to its uſe. The ſame perſon, Mr. E. Oxley, of this town, was relieved in a few minutes, and permanently cured, by full doſes of it, of a moſt violent hemicrania, attended with intenſe heat and thirſt, with a feeble pulſe which beat about 140 ſtrokes in a minute. Laudanum in large quantities, and other means, were adminiſtered with evident aggravation of every ſymptom before I ſaw him. Being in the country when ſent for, they "thought," to uſe their own words, "he would go from his ſenſes before I arrived."

In a moſt violent caſe of external and internal hæmorrhoidal affection, now under my care, 40 drops gave almoſt immediate relief, and the patient is recovering rapidly by 35, evening and morning. When he firſt came to me, his countenance was pale and ſallow, his ſtrength and fleſh much exhauſted; he walked with extreme pain and difficulty; his pulſe was quick and ſmall, and his appetite impaired. In a week the contraſt was very ſtriking.

The diſeaſe had reſiſted judicious treatment for five weeks.

But in many other inſtances, as well as in conſumption, the practitioner

practitioner must be prepared for disappointments, by this, as by every other human means. Certain diseases are beyond the reach of our art; and this may probably be wisely intended by the Author of our being, in order to impress our minds with our own insignificance. If the tinctures be properly prepared, of the genuine leaf, they will not be pale as brandy, but of a darker tinge than laudanum, of which two vials now before me exhibit a striking proof.

I have this year dried, and am now drying, several pounds of the leaves of my own garden, on a net properly suspended in a chamber through which a current of air passes, but from which the rays of the sun are excluded; and, especially when large quantities are prepared, this method, as being simple, easy, and certain, is perhaps preferable to any yet adopted.

Most cheerfully do I acknowledge myself indebted to Dr. Drake, and the celebrated author of the Zoonomia, for directing the attention of medical men more immediately to the tincture of Fox-glove. By means of this preparation I have been enabled to alleviate human misery to a much greater extent than would otherwise have fallen to my lot to do. I can now readily furnish a number of distressed objects, who come daily to implore my assistance, with a small vial; whereas I had no means of providing them with the infusion, or pills made of the powder. In this way, it is one of the highest gratifications of my life to reflect, that I have done much good, and, I trust, may be enabled to do much more. When a decoction, or strong infusion is deemed necessary as an external application, my garden immediately supplies them.

An interesting case in point, now comes to my recollection: —— Bridget, an infant a year old, was brought for my advice the 21st of November last. A highly inflamed scaly eruption, discharging a thin ichor, with here and there painful pimples, all over the head, had harassed it from its birth. Medicine had been resorted to in vain. I gathered a handful or two of fresh leaves, with which I directed a strong decoction to be made, and the head to be bathed with a little, evening and morning. It was brought to me again the 27th, nearly well; and on the 2d of December free of complaint. It gave me pleasure to observe, soon after this, in Dr. Ferriar's excellent treatise, similar happy results. In a case of true *tinea capitis* it failed with me; but in itch it seems an effectual remedy, of which the first hint was given me by Mr. Anderson, an intelligent practitioner of this place.

The principles on which I give the preference to the tincture, in certain cases, have been explained, (*ib. vol. iii. p.* 152, *et seq.*) and are very different from those on which Dr.

Drake prefers it. He has thought proper to condemn the powder as a preparation, "by which the wiſhed-for effect in conſumption would ſeldom be produced," without trying it in a ſingle inſtance! This extraordinary aſſertion, without the ſhadow of proof, I have already called to his recollection, (*ibid.*) and he has not attempted to contradict it; nor can he contradict it, without impeaching his own veracity; for he expreſſly tells us, the tincture was the only preparation uſed in all the caſes he has brought before the public. By what authority then, or on what grounds, does he preſume to pronounce his anathema againſt a ſubſtance he has never put to the teſt of a trial in conſumption? A ſubſtance too which has been uſed with ſucceſs by others in the diſeaſe; and which has, under the eye of the higheſt medical authorities in this kingdom, produced every effect on the human body of which the tincture is capable.—A word or two may, probably, tend to unravel this myſtery.

In one of the caſes alluded to, in his communication for Oct. laſt, (*ib. vol. ii. p.* 267) he tells us, "that the firſt, a young man about twenty-eight years of age, had been under the care of two phyſicians in the neighbourhood previous to his being called in." After drawing the hiſtory of the caſe, I doubt not, very correctly, the reader is informed in a note theſe phyſicians were "Dr. M'Lean and Dr. Clubbe, by whom the Digitalis had been adminiſtered in the form of powder; the wiſhed-for effect, however", continues he, "can ſeldom be produced by the powder, &c." "The tincture was puſhed to 120 drops in twenty-four hours." But after being three weeks under "its full influence, with the ſymptoms nearly ſtationary, he became averſe towards proſecuting it farther; nor could I perſuade either him or his friends to permit a more extenſive trial. He died in five or ſix weeks after." What inferences are intended to be deduced from theſe premiſes? They appear to me obviouſly theſe:

1. That the powder having been adminiſtered by two phyſicians, had a fair trial; but,

2. That as the "wiſhed-for effect is ſeldom produced by the powder," it failed as a natural conſequence.

3. That had the tincture been given by theſe phyſicians, ſucceſs would moſt probably have attended it, as general ſucceſs was at this time promiſed from it.

4. That had the tincture been perſevered in during the Doctor's pleaſure, a happy reſult would moſt likely have been the conſequence; for the failure is not attributed to want of efficacy of the medicine, but want of reſolution of the patient, "the ſymptoms being nearly ſtationary." And,

Lastly,

Laſtly, That theſe two phyſicians fell under the heavy imputation of neglecting the only means of ſaving their patient.

I anticipate very different concluſions, however, from the candid reader, on peruſing the following brief ſtatement.

My firſt viſit to Mr. Boutelle, of Poliſtead, the ſubject of this caſe, I find by my notes to have been on the 24th of March, 1799. In addition to the ſymptoms detailed by Dr. D. he was copiouſly expectorating blood, generally florid, which he had done more or leſs from the commencement of his diſorder. I ſaw him again on the 30th, and I perceive by my memorandum, I thought him ſomewhat better. The Digitalis was now preſcribed, as follows:

℞. Fol. dig. p. pulv. gr. viij G. arab. p. gr. vj. Confect. aromat. q. s. ft. Bol. no. octo. ſumt. 1 ſing. noct. et matutinis.

Saline mucilaginous draughts were likewiſe preſcribed every ſix hours.

The next tidings I had of him, from Mr. Salter the attending ſurgeon, were by letter a week after. I was informed that eight pills only were taken; that the laſt two diſordered him much and head much; that he poſitively refuſed perſevering in them any longer, as he thought himſelf worſe the whole time of taking them; that his friends and himſelf became reſtleſs and impatient, and wiſhed to have further advice. I was much ſurpriſed to find, from Mr. Salter's letter, that the hæmoptoe was evidently aggravated during the uſe of the medicine. Having occaſion to meet Dr. Clubbe of Ipſwich, in conſultation, the following day, the 9th of April, in the neighbourhood, we were deſired to ſee Mr. B. and it is but juſtice to Dr. Clubbe's ſagacity and diſcernment, to declare, that he pronounced the caſe at once hopeleſs. I own there appeared to me ſtill ſome ray of hope. The Digitalis was not again preſcribed; for, as hinted on a former occaſion, Dr. C. had been extremely unſucceſsful with it. I ſaw the patient no more.

As we promiſed nothing, ſo we neither deſired, nor were ſolicited, to repeat our viſits. At this time the miraculous cures that had been, and were to be, performed by the tincture, were loudly thundered forth from the trumpet of fame. Hadleigh was within a few miles; the pleaſing ſound ſoon reached the ears of the patient and friends. They naturally ſought relief where they were taught to believe they were certain of finding it; "for the tincture had not as yet failed in a ſingle inſtance." The Doctor was called in. What were his promiſes may be eaſily conjectured. Of what followed we are apprized. On the above ſtatement I ſhall only offer one or two further remarks.

When a favorite remedy fails, it unfortunately happens that the

the author generally finds something or other at hand to account for the failure. Every thing unfavorable to his purpose is scrupulously kept in the back ground, while every favorable circumstance is exhibited to view, as evidently happened in the present instance. "The powder was administered by two physicians," that is, it had a full and a fair trial; but it was not a preparation suited to the case; hence, "the wished-for effect could not be produced." But had the tincture been at first used, from which, on the Doctor's authority, general success was promised, or had it been persevered in afterwards, for "the symptoms were nearly stationary," the reader is left to infer that the case would have terminated otherwise than it did. The constitution of this patient, as I have since more than once experienced, was in a particular manner susceptible of the noxious effects of the Fox-glove. Small doses disordered every organ and function, and even encreased the flow of blood from the vessels of the lungs. I firmly believe then, that it was one of those unfortunate cases which would have resisted the salutary powers of the tincture of Fox-glove, and every other human aid, although judiciously administered from the first week of his illness.

If the Doctor has condemned what he has not used, it is not surprising that he should have disapproved of what he has not seen. His objections to, and mode of arguing against, what I have said on the culture of the Fox-glove in my garden, are of a most peculiar cast. I affirmed, (*ib.* p. 121.) that in consequence of the disappointments experienced from the bad quality of the leaf the first few years I prescribed it, "I had for some years cultivated the plant in my garden, whereby I had reason to believe its virtues were improved; that I was certain they were not impaired." To which the Doctor thus replies, "With regard to the plant itself, I can assure Dr. M. he is deceived in supposing it to acquire greater vigour from cultivation in a garden. Nineteen times out of twenty he will find the reverse to be the event. The Digitalis delights in an elevated, a light and gravelly soil; on a *fat* and *dense* mould, in *low* and *damp* situations, and where *strata* of *chalk* abound, it always degenerates, becomes dwarfish, and of a paler green. Dr. M's house at Sudbury, is certainly situated low, not far from the river, in the immediate neighbourhood of chalk-beds; on such a soil, it is evident none of the habitudes of the plant can be gratified; and by the usual modes of improving a garden, the ground will be rendered still less fit for promoting its growth and strength, &c." (*Ib. vol.* ii. p. 421.)

I own I was not aware of the shadow of an objection to what I ventured to say on this head. I fancied to myself the facts above

above ſtated, had been aſcertained both by my medical friends and me, after repeated trials, beyond the poſſibility of doubt. But Dr. Drake ſeems to poſſeſs the happy talent of acquiring that knowledge by intuition, which others cannot attain by experiment and attentive obſervation. For, as far as I know, he has never been within the walls of my garden; he has never ſeen the Digitalis growing in it; nor has he put the virtues of the leaf, thus reared, to the teſt of a ſingle experiment!

The reader will perceive that I ſpoke only of my *own* garden; and had he *poſitively* contradicted my aſſertion, I could have anſwered and confuted him in *one* word. Aware however, I preſume, of the conſequences of one gentleman calling in queſtion the veracity of another, without ſubſtantial evidence, he prudently avoids this, and, with a ſpecies of ſophiſtry that may impoſe on weak and ſuperficial minds, but too ſhallow, I truſt, not to be at once detected by men of diſcernment, ſhifts the ground, and fabricates a ſoil and ſituation for my garden, which exiſt only in his own imagination; and with an air of profound ſagacity tells us, the Digitalis will not thrive in ſuch a ſoil or ſituation. The terms "on a fat and denſe mould, in low and damp ſituations," &c. are not to be found in my remarks; and ſuch a ſoil and ſituation are certainly not thoſe of my garden. The gardeners and farmers of this country would laugh at his definition of the ſoil of our gardens and fields, and bluntly tell him he was totally ignorant of what he claims a familiar acquaintance with. They would aſſure him, they are neither chalky nor calcareous, nor denſe nor damp; that wherever chalk-beds are found, the chalk is ſeveral feet, in general many yards, beneath the ſurface, a thick ſolid ſtratum of gravel intervening; that neither the plough nor the ſpade ever reach it, except where the natural ſoil has been removed to fill up inequalities, as I have obſerved in a field in the pariſh of Henny, in Eſſex, a few miles from Sudbury; that although the ſoil may vie in fertility with any in the kingdom, it is rather of a looſe than of a denſe and ſolid texture. This is the ſum of the information I have received from the gardeners and farmers, and accords with my own obſervations; and few have traverſed its ſurface, for ten years, more frequently. But, for argument's ſake, admitting the ſoil, and every other circumſtance, to be as the Doctor repreſents them, does he imagine that any one, finding the Fox-glove growing luxuriantly in an elevated ſituation, in a light gravelly ſoil, would be ſo conſummate a blockhead as to plant it in "a fat, denſe mould, in a low, damp ſituation, &c?" I can aſſure him we have no ſuch in this part of Suffolk. Our gardeners here have more intelligence than he ſeems aware of; they would inform him,

ſtrenuous

ſtrenuous as he is for leaving this plant in the hands of nature, that both this, and hundreds of others, originally growing in the fields, are now reared in gardens, in much higher luxuriance than in their original ſtate; that although ſome vegetables degenerate and die, yet many others are improved in all their properties by ſuch removal; that one of the principal ends of their art is, to improve upon Nature when ſhe is deficient, to imitate her when ſhe has attained the higheſt degree of perfection of which ſhe is capable.

Whoever has attended to the Digitalis in its natural ſtate, muſt have ſeen, that in the ſame field or hedge-row, ſome plants are in full health and vigour, while others are weak and dwarfiſh. Nature often diſtributes her gifts, for wiſe and ſalutary purpoſes, with a liberal, often with a ſparing hand; and the intelligent botaniſt, even the moſt ignorant gardener, well knows that the ſoil and ſituation in which ſhe has placed her numerous offſpring, animals as well as vegetables, are not always the moſt congenial to them. But, far be it from my wiſh to adviſe the officious interference of art, where ſhe is bountiful of her gifts. It was not until I had experienced repeated diſappointments, that I was induced to cultivate this valuable plant within my immediate reach, and ſtrenuouſly to recommend it to many of my medical friends; and from the additional confidence which farther experience inſpires, I not only venture to repeat, what I have already ſaid in reply to the Doctor's objections, (*ib. vol. iii. p.* 151, *et ſeq.*) but affirm, that I never ſaw it in any place, and I believe it never did, attain to ſuch beauty and perfection, as well as height. I have heard of its growing ſix and ſeven feet high in its natural ſtate. I never ſaw this: The imagination of thoſe who argue like Dr. D. may readily magnify it to this height, while it would reduce that of my garden to dwarfs,—to mere pigmies. Dr. Withering ſays, "the ſtems are about four feet high." I have, I think, ſeen it higher than this: the talleſt of my produce, by accurate meaſurement lately, were five feet ten inches high; but thoſe of three and four feet throw out the ſtrongeſt and coarſeſt leaves. They have one peculiarity likewiſe, which I have not obſerved in the wild plant, which adds much to their beauty and elegance, and which they ſeem to derive from artificial culture. They have from four to ſix ſmaller ſtems, ſome of which are two feet in length, with ſeveral bloſſoms iſſuing from the principal ſtem, at twelve and eighteen inches from the ground. Theſe come later, and the bloſſoms continue longer than the principal ones: they are not in Withering's plate, or in any I have ſeen. Are they uſual?

The ſtems of the white plants are more delicate and ſlender; the

the leaves of a paler green, of a ſmoother texture, and in general not ſo large as thoſe of the purple. I have diſcovered no difference, however, in their virtues. The two plants form a moſt beautiful contraſt; and as there is a ſucceſſion of bloſſoms for ſome weeks, few contribute more to the ornament of the flower garden.

Were it neceſſary to adduce farther facts, in oppoſition to general aſſertion, I might add, that two pariſhes (Higham and Lawford) adjoining to Eaſt Bergholt, in which the Doctor loaded his cart with Fox-glove, ſupplied me moſt liberally laſt ſummer, on which many trials were made.

What I have ſaid of the neceſſity of free expoſure to the ſun and air, &c. is not only ſtrictly correct, but a general law in regard to vegetables, with as few exceptions, at leaſt, as any other. When gathering the plants at Lawford Hall, on the grounds of my much reſpected friend, E. Green, Eſq. of that place, hundreds were rejected, becauſe they were ſo ſhaded by trees, and ſo ſurrounded by weeds and other plants, as, from want of ſun, air, and nutriment from the earth, not to arrive at a quarter of their natural ſize. They were thin, pale, and ſickly; ſome of the ſtems were tall, but very weak and ſlender. In a long and painful attendance lately on my truly worthy friend, the late Rev. Dr. Preſton, of this country, a ſtriking inſtance of this occurred to me: In his beautiful ſhrubbery I had often admired the luxuriant growth of the Fox-glove; of late, from cauſes unneceſſary to ſtate here, the grounds had been neglected, and were conſequently over-run with weeds; in vain did I for ſome time look for my old acquaintance; at length, however, I found a few weakly plants concealed by the weeds, without any *ſtems or bloſſoms*.

[To be continued in our next.]

Celeberrimo Doctori G. PEARSON, &c.
S. P. D.

Med. et Chir. Dr. J. C. W. JUNCKER,
Profeſſor Medicinae in Academia Regis Boruſſorum Halenſi Ordinarius, &c. Halae Magdeburgicae, d. 17 Junii, 1800.

COGNITUM forte habebis, vir celeberrime, ſocietatem medicorum Germaniæ ac Helvetiae mecum conveniſſe, ut miſeriis humanis, quae a veneno varioloſo proveniunt, limites,

quoſcunque ponere liceat, ponantur. En! brevem hujus inſtituti hiſtoriam.

Anno 1791, in urbe noſtra morbi graſſabantur maligni, ſic dicti nervoſi. Inſitio variolarum hoc tempore temere inſtituta (n gle&ctis nempe regulis, quae ad evitandam mali propagationem ſpectant) anſam praebebat epidemiae variolarum. Haec invaſit homines 2151; ex his necavit 430; alios 7 videndi facultate privavit, et multifaria denique mala reliquit in hominibus 280. Dicto anno et partim etiam anno ſequente ſingula urbis noſtrae aedificia quin et pagos proxime vicinos exploravi reſpectu variolarum; auditorum nempe 20 auxilio adjutus. Quot et quantas miſerias malum varioloſum ejuſve inſitio temere inſtituta induxerit, hoc modo (dicta nempe exploratione aedificiorum, &c.) ſatis exacte poterat cognoſci. Mala, quae tum vidi, animum moverunt mirifice. Jam fretus multorum (potiſſimum medicorum) promiſſis, &c. fore ſperabam, ut noſtrae urbis incolae optimis conſiliis, quibus malum varioloſum vel mitigari vel arceri poſſet, aures praebituri ſint benevolas. Egregio exemplo noſtrates praeire alioſque vicinos ad imitationem utiliſſimam, tali exemplo praegreſſo, eo facilius movere poſſe putabam. Edidi in hunc finem primis menſibus anni 1792, librum de variolis, in uſum praeprimis Halenſium conſcriptum.* At ſpes me fefellit. Paulo poſt, cum hiſtoriam morbi cujuſdam (Doctoris nempe Bahrdtii) deſcriberem, † querendum jam erat de auxilio medicorum quorumdam circa variolas denegato, &c. (Cfr. libell. infra laudatus, No. 2, p. 54.)

Seriori inſtituta hac de re meditatione, aliam viam incedendam et ad omnes reliquos, quamvis remotiſſimos, *humanos* tamen medicos, nec non ad magnates quoſcunque, &c. ſenſim confugiendum eſſe, ſentii. In libello itaque anno 1795 edito,‡ medicorum Germaniae attentionem dirigere ſtudui ad majus quoddam

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* *J. C. W. Juncker's*, &c. Gemeinnützige Vorſchläge und Nachrichten über das beſte Verhalten der Menſchen in Rückſicht der Pockenkrankheit. *Erſter Verſuch* Halle 1792. Gr. 8. ſ. 236 und 96. (Jetzt in Commiſſion Halle bey Hemmerde. Pr. 1 th ler.)

† Etwas über die Weinbergskrankheit des verſtorbenen Doctor Bahrdts und ähnlicher noch lebender Kranken. Den Nichtärzten zur freundſchaftlichen Warnung mitgetheilt von Dr. *J. C. W. Juncker*, &c. Halle in Commiſſion bey Hemmerde, 1792. Kl. 8. ſ. 55. Pr. 5 groſchen.

‡ D.. *J. C. W. Juncker's*, &c. Gemeinnützige Vorſchläge und Nachrichten über die Pockenkrankheit. Für Deutſchlands Aerzte. Ein Vorſchläge aus der Volksarzneywiſſenſchaft. Halle bey Hemmerde, 1795. Gr. 8. ſ. 67. Pr. 5 roſchen. (Item ſub titulo: Gemeinnützige Vorſchläge, *Zweyter Verſuch.*)

quoddam de variolis opus proxime proditurum, in quo omnia, quae huc pertinent, uberius essent illustranda.

Id quod prodiit sub titulo inferius laudato,* anno 1796. In hoc opere viam designasse mihi videor, qua quidem medicis illam incedentibus certissime datum foret, successivam praeparare et ad finem perducere variolarum exstirpationem; et 84 objectiones, huic exstirpationi oppositas, refutavi, ad viam nempe dictam respiciens. Simul autem ex omnibus Germaniae medicis petii, ut, quidquid circa hanc viam monendum esse ipsis videretur, mecum communicarent.

His precibus jam nunc multo plures satisfecerunt medici, quam 300; inter quos plures eminent nostri instituti egregie participes.—Plures simul nummos dono dederunt, unde enatum est, quod optaveram, *aerarium contra variolas generale* seu *commune* (h. e. variolarum remotioni in universum dicatum. Neque enim *singulis* quibusdam, sed *omnibus* locis illud aerarium dicavimus, illudque opponimus aerariis *localibus*, quibus fore speramus, ut in hoc illove *loco* incolae ejusdem aliquando sibi prospiciant. Dictum vero *aerarium commune* jam nunc circiter continet duo millia imperialium, numeratis nempe simul nummis subscriptionis lege promissis.)

Ut vero judicia medicorum facilius transmitti potuerint, ex omnibus fere, qui Germaniam regunt, magnatibus precatus sum, ut, finito quovis anno, numerum eorum, qui praeterito anno in suis regionibus mortui essent variolis, aliaque, quae variolarum respectu memoratu digna viderentur medicis seu verbi divini ministris, colligenda et haec denique omnia collecta sive summatim excerpta mihi transmittenda curarent. Responderunt his votis plurimi iique potentissimi Germaniae principes; Imperator v. g. Germaniae; Rex Borussorum; Elector Saxoniae; Duces Saxoniae; Magnates Harsiae; Megapolitani; Anhaltini, aliique multi.

Tot itaque adminiculis instructus inde ab anno 1796 *periodicum opus* edidi, ut quovis anno vel semestri innotesceret, quales in hac causa progressus fecerit societas medicorum. Cujus quidem operis huc usque prodierunt volumina septem.†

Volumen

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* Dr. *J. C. W. Juncker's*, &c. Gemeinnützige Vorschläge wider die Pockenkrankheit. *Dritter Versuch.* Für möglichst alle Aertze, die der deutschen Sprache kundig sind; zur Sammlung ihre Gutachten hierüber. Halle bey Hemmerde. Gr. 8. f. 502. Pr. 1 thal 8 groschen.

† Archiv der Aerzte und Seelsorger wider die Pockennoth. *Erstes Stück.* Michaelmesse 1796. Heraus gegeben von Dr. *J. C. W. Juncker*, &c. Leipzig in der Weygandschen Buchhandlung, 1796. Gr. 8. f. 296. Pr. 18 groschen. *Zweytes Stück.* Ostermesse 1797. Gr. 8. f. 306. Pr. 22 groschen. *Drittes Stück.* Michaelmesse 1797. Gr. 8. f. 218. Pr. 18 groschen.

Volumen octavum prodibit tempore nundinarum Lipsiensium, quae sequuntur. Novo, quod proximum est, seculo idem opus periodicum, titulo paululum mutato, continuabitur. (*Neues* Archiv wider das Pockenelend, &c.)

Jam vero comparatis Germaniae medicorum suffragiis, meum esse putavi, in unum colligere, quae omnibus istis medicorum consiliis consentanea sint, quaeque *nostris* temporibus et adeo diversis locis Germaniae, &c. respondeant. *Et haec quidem omnia* (missis ceteris, in quibus medici dissentiunt, &c.) *cum omnibus Germaniae magnatibus praesenti anno* seu certe primis futuri anni mensibus communicabo.

Responsiones magnatum exspectamus sequente anno 1801. Quibus collectis novum de successiva variolarum exstirpatione opusculum lingua Latina aeque ac Francogallica conscriptum, *omnibus* itidem *exteris*, quibuscunque licebit, *magnatibus* transmittendum curabit societas medicorum. Brevem hujus libelli mentionem jam feci in *Mémoire adressé au Congrès de Rastadt, concernant la petite vérole* mense Maii 1798. De his autem et similibus suo tempore pluribus te reddam certiorem.

Utinam et tibi placeret, vir praestantissime, *finito quovis anno* mecum communicare, quae tibi nuperius digna visa sint memoratu circa variolas *in patria tua!* (quinam v. g. libri huc pertinentes anno quocunque praeterito prodierint? quae *remedia* horrendo huic veneficio opposita sint *vi legum* vel *suasu medicorum? &c.*

Et hoc quidem *primum* est, quod ex te precor. *Delectes me hujus generis epistolis finito quovis anno!*

Alterum vero momentum, cujus causa has litteras conscripsi, *insitionem* spectat *variolarum vaccinarum.* Legi de his sequentes libros: 1. An Inquiry into the Causes and Effects of the Variolæ Vaccinæ, &c. by *E. Jenner*, Lond. 1798. (vers. in linguam Germanicam, *Ballhorn*, Hannover, 1799; in linguam Latinam *Careno*, Vindob. 1799;) 2. Further Observations, &c. by *E. Jenner*, Lond. 1799. 3. An Enquiry concerning the History of the Cow-pox, &c. by *G. Pearson.* London, 1798; (vers. in linguam Germanicam, *Küttlinger.* Nürnberg, 1800;) 4. Reports of a Series of Inoculations for the Variolæ Vaccinæ, or Cow-pox, &c. by *W. Woodville.* Lond. 1799. (Vers. in linguam Germanicam, *Friese.* Breslau, 1800.)

Jam

Viertes Stück. Neujahrsmesse 1798. Gr. 8. s. 291. Pr. 1 thaler 4 groschen. *Fünftes Stück.* Ostermesse 1798. Gr. 8. s. 320. Pr. 22 groschen. *Sechstes Stück.* Michaelmesse 1798. Gr. 8. s. 304. Pr. 1 thaler. *Siebentes Stück,* Michaelmesse 1799. Gr. 8. s. 352. Pr. 1 thaler 4 groschen.

Jam vero in votis eſt, ut infantibus quibuſdam Halenſibus, quos in deliciis habeo, aeſtate hujus anni ſive ejuſdem autumno inſerere queam variolas vaccinas. Ne vero decipiar et materiem forte accipiam a variolis vaccinis *ſpuriis* depromptam aliove reſpectu ſive pernicioſam ſive non ſatis efficacem: *Ardentiſſime ex te precor*, Ut mihi, quam proxime fieri id queat, tranſmittendam cures materiem his votis apprime conſentaneam. Quem igitur in finem ſollicitus, quaeſo, ſis de homine ceterum *ſaniſſimo, qui poſt inſitionem materiei*, e vacca puſtulis vaccinis laborante *recenter* depromptae, variolas vaccinas *veras leniter* (ſueta, volo, non anomola ratione) perpeſſus ſit. Materiem ex HOC HOMINE depromptam mihi, precor, tranſmittendam cures, vaſe *v. g.* vitreo bene obturato et capſula inſuper *v. g.* lignea munito incluſam. In ſchedula annexa tua manu benevole teſteris, materiem hoc vaſe incluſum *vere talem eſſe qualem optaverim*, eamque igitur ita eſſe comparatam, ut ab inſitione ejuſdem (ceterum rite inſtituta) ſoliti et ſalutares eventus expectari queant.

Quibuscunque impenſis hujus generis labor anſam forte praebiturus ſit, gratiſſimo animo compenſabo. — Si forſan *cautelae quaedam*, quae *inſitionem hanc* ſpectant, ad notitiam tuam *nuperius* veniſſent, quarum in libris ſupra laudatis mentio facta *non* eſt: *has quoque cautelas* mecum benevole communices!

Vale. Fauſta quaevis Tibi apprecor!

P. S.

Adreſſe.

Litteris Tuis extus quaeſo inſcribas:

Dem Herrn,
Dr. *J. C. W. Juncker*,
Profeſſor der Medicin auf der Koeniglichen Preuſſiſchen Univerſität.

Nebſt einem Päckchen, bezeichnet:
Medicin aus London, an H. P. J. zu Halle.*

Zu HALLE, (bey *Leipzig.*)

* Haec verba inferius et ſiniſtrorſum poſita ſignificant: litteras tuas comitari vaſculum, quod contineat medicinam Londinenſem, et quod ſignatum ſit verbis: an H. P. J. zu Halle.

The foregoing Letter was ſent to Dr. PEARSON, and by him given to the Vaccine Pock Inſtitution, from which we have permiſſion to inſert it. — EDIT.

To Dr. BATTY.

DEAR SIR,

IF you will insert the following definition of the Cow-pox, in the next Number of your useful Journal, you will add another obligation to the many attentions already shewn to

Plymouth Dock,
July 7, 1800.

Your obliged humble servant,
RICHARD DUNNING.

VACCINA JENNERIANA.

Morbus Vicarius, potiusve Processus succedaneus, mirifico Variolam cèrte præveniendi, immò (quod verosimilius sit) penitùs abolendi fungens munere, neve ullam futuræ Saluti vel minìme adversam Sequelam iliaturus. — Cuticulari Vulnusculo Vaccinitate appositâ, Tumor parvus, *localis*, *vesiculosus*, *carbunculosus*, inde exortus, Febrem ephemeram plerùmque quàm levissimam et omnìno incontagiosam incitans; paucis Papulis, subinde, sed *perràro*, *nec necessàrie* supervenientibus, tertioque ferè die prorsus evanescentibus.

To Dr. BRADLEY.

DEAR SIR,

I Thank you for the Cow-pox matter, with which I began to inoculate on the 6th instant; and have the pleasure to inform you, that most of the children have taken the infection. I enclose a case, which, with the remarks, I hope you will think worthy of a place in your valuable Journal. I am,

DEAR SIR,
Your obliged and faithful servant,
JOHN MILNER BARRY, M.D.*

Cork, June 18, 1800.

HYPOTHETICAL theory too often opposes the progress of knowledge, by withdrawing the attention from facts, and discouraging a disposition to observe the phænomena of disease, and the action of medicines, without which it is impossible to make any advances in medical science. But, strange as it may appear,

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* In No. XVI. p. 504, this gentleman's name was, by mistake, printed Bany.

appear, it is not among men, who devote a great portion of their time to reading and ſpeculation, that we find thoſe, who are moſt liable to grant this unwarrantable preponderance, to conjecture over facts. Men who profeſs to be governed entirely by experience, who affect to deſpiſe theory of every kind, however legitimate, and who indulge an unbounded ſcepticiſm about every new improvement, are the genuine ſlaves of hypotheſes, which have been long diſcarded from the creed of every enlightened practitioner. When ſuch men attempt to theorize, that is, to draw general inferences from what paſſes before their eyes, which they are forced to do as well as their better-informed brethren, their reaſonings are compoſed of a confuſion of hypothetical opinions and expreſſions, imbibed without examination in their early ſtudies, which, in the lapſe of years, while ſcience advances, preſerve a ſtrong and undivided power over their minds. They are the firſt to cenſure, and the laſt to adopt the ſucceſſive improvements in their profeſſion, and are the more dangerous to the cauſe of ſcience and humanity, becauſe they uſually poſſeſs a ſtock of arguments, which favour the natural indolence, and neceſſarily limited information, of the generality of mankind.

The opinions relative to the effect of heat and cold on the human body, which long prevailed in the ſchools, were intirely drawn from the analogy of unorganized matter, and the *vital principle* was overlooked, or wholly diſregarded. It gives me pain to obſerve, that the doctrine of relaxation, which is a neceſſary conſequence of this falſe analogy, is ſtill admitted by many practitioners, and has prevented the more general uſe of the warm bath, which, from the united teſtimony of phyſicians of the greateſt reſpectability, is not only a ſafe, but a moſt efficacious remedy. The following caſe, beſides poſſeſſing ſome claims to notice in other reſpects, muſt furniſh the advocates for this exploded hypotheſis, with a ſatisfactory refutation, and may facilitate the application of it, in diſeaſes of extreme debility, where other means have been tried without ſucceſs. I hope this will be a ſufficient conſideration to excuſe its publication, as well as the previous remarks.

Miſs Ellen M'Sweeny,* æt. 21, July, 1799, after much faſting

* This lady belongs to a religious ſect, which in this part of Ireland, expects from its votaries, a rigid compliance with all the rules of the church. The ladies, as may naturally be ſuppoſed, are much more ſtrict in the obſervance of faſt days than the men, who differ very little in this reſpect from the Continental Catholics. It will ſcarcely be believed, but is notwithſtanding

faſting and abſtinence during laſt Lent, ſat up for ſome nights with a friend, who was ill of a fever, which terminated fatally. Grief, fatigue, want of reſt, together with the previous debilitating effects of faſting, or a diet not ſufficiently nutritive, brought on ſlight hyſterics, which were followed by frequent vomiting after food or drink. I firſt ſaw her in the month of April laſt, which was about five or ſix weeks after the firſt attack. She complained of a dull pain in the region of the ſtomach, extending to the back; ſhe threw up every thing ſhe ſwallowed during the day, but ſometimes retained about a pint of whey at night, if ſhe dropped aſleep immediately after taking it. Her ſtrength and appearance were not yet materially altered; her pulſe was ſixty, countenance pale, belly coſtive, catamenia regular. I directed ſucceſſively, laudanum, æther, bitters, the ſaline julep, and Schweppe's Seltzer water; I alſo ordered a warm plaſter to be applied to the ſtomach, and ſome aloetic pills to obviate coſtiveneſs. I adviſed that ſhe ſhould take her food in ſmall quantities, and uſe gentle exercife on horſeback, which ſhe had previouſly tried with ſome apparent benefit. Her retaining the whey at night, ſuggeſted the idea of ſubſtituting broth, which anſwered for ſome nights, but was afterwards rejected as ſoon as taken.

Her friends perceiving her evidently growing worſe under this treatment, brought her to Cork, in May laſt, that ſhe might be under my immediate care, and have the advantage of additional advice. She was now much emaciated, her pulſe was weaker, and her general ſtrength very much diminiſhed; the pain of her back and ſtomach was increaſed; her legs ſwelled towards evening; ſhe ſtill rejected her food and drink without any apparent effort; ſhe had not above two hours ſleep at night, from which ſhe awoke unrefreſhed. At this time my friend, Dr. Sagrue, ſaw her with me, and ſuſpecting an affection of the liver, ſuggeſted the trial of mercury, which was uſed ſo as to excite ſlight ptyaliſm without any advantage. A bliſter to the ſtomach, and another to the back ſoon after, intirely removed the pain. Some internal remedies were given of the ſame nature with thoſe already mentioned; but perceiving

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ing an undoubted fact, that many of the delicate young ladies of the town of Macromp, where Miſs M'Sweeny reſides, actually live on one meal a day, during the entire of Lent annually; and as meat is prohibited, and they ſeldom have an opportunity of getting fiſh, this meal is in general nothing more than bread and butter and tea. The conſequences may be eaſily imagined. It is to be hoped that a more liberal policy, with regard to the clergy of this extenſive ſect, will ſhortly put an end to this profligate waſte of health and life.

ing no benefit from them, she was confined to port wine highly spiced, and broth, of which, by the most cautious management, she was at length able to retain about four or five tea spoonsful of each in a day. But, whenever we attempted to exceed this quantity, the intire of what she had taken for the day was instantly thrown up. She soon after returned to the country, without leaving her friends or her physicians the smallest hope of her recovery.

Having occasion, in a short time after, to visit a patient in her neighbourhood, I called on her, and was really shocked at the sudden alteration in her appearance. She was in every respect worse, the weakness and emaciation were increased, her features were collapsed, and her skin was of a deadly paleness; the period had passed without the menses appearing; she had scarcely any sleep; she constantly vomited at night the whole of the broth and wine she took in the course of the day. I had just read the extracts from Dr. Marcard's work, (Ueber den Gebrauch der baden) in Dr. Beddoes's valuable Essay on Consumption, which though they did not exhibit any instance exactly similar to that of my patient, yet furnished some analogical facts, not unfavourable to the trial of the warm bath in her case. From the manner in which the disease originated, and the extreme debility which it had induced, I derived some faint hopes from the gently stimulating effects of this remedy. The first trial, however, was rather discouraging. The bath was heated to about 98 degrees of Fahrenheit. She was seized with a vomiting the moment she entered it, which ceased on her being taken out. She thought she felt weaker the remainder of the day, and had frequent returns of coldness and shivering. Next day, the bath was made some degrees warmer, and she continued in it a quarter of an hour, without the least inconvenience. She felt warm and comfortable the intire day after. She retained a quantity of milk and tea on her stomach, and slept six hours that night. Encouraged by this trial, she persevered in the daily use of the bath, gradually increasing the temperature of it, with the same beneficial effects. She soon gained sufficient strength to bear the exercise of the swing, which she had before attempted, without success. Her diet was milk, broth, jelly, tea, and coffee; and by my advice she soon after added, bread, potatoes, cauliflowers, and artichokes, without any return of the vomiting. But she found, on repeated trials, that meat in a solid form, however prepared, or seasoned, would not remain a moment on her stomach. In about six weeks she was so much recovered, as to think the bath no longer necessary, and by my advice she discontinued it. I suspect that rejection of meat in a solid form, depends

rather on ſome naufeating aſſociation, than on any remaining debility of the ſtomach, as ſhe retains and digeſts ſubſtances, which are in general conſidered as much more difficult of digeſtion. She has lately made no trials with it, and yet her health is perfectly reſtored, and ſhe is even fatter and more blooming than ever.

I lament that the degree of the thermometer to which the bath was heated, was not daily aſcertained. It muſt have been greater than the ordinary temperature of warm baths, as her ſiſter aſſured me, that it was in general ſo hot, that *ſhe* could not bear her hands in it.

The above ſtatement was drawn up at different periods, previous to October or November laſt. I ſaw Miſs M'Sweeny a few days ago; ſhe continues well, and very much diſpoſed to fat; ſhe began to eat meat in laſt month, and has continued it ſince without any inconvenience.

There is another doctrine, which appears to be better founded, that has been objected againſt the warm bath, viz. the danger of catching cold. A medical friend of mine, who unites an ardent love of improvement with the experience of a long life, has been many years in the habit of recommending the warm bath in caſes of great exhauſtion from lues venerea, as well as to obviate the debilitating effects, occaſioned by the immoderate exhibition of mercury, with the happieſt ſucceſs. He has aſſured me, that in ſuch caſes he has never found it neceſſary to injoin any precautions for avoiding cold. On the contrary, when the patient's ſtrengh was ſufficient, he always adviſed him to go into the air after bathing, and never obſerved any bad effects from it, even in cold weather. The luminous theory of Brown, ſo happily explained and illuſtrated by Dr. Beddoes, deſerves attention on this ſubject.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

THE early and polite attention which you did me the honour to pay a former Eſſay, emboldens me to ſubmit the following remarks to your conſideration. I am,

GENTLEMEN,

With great reſpect,

Army Hoſpital, Yarmouth, July 14, 1800.

Your very humble Servant,

S. C. BLYTH.

On the prevailing Taste for Hypotheses in Medicine, with a Review of ancient Practice in acute Diseases.

IT is somewhat strange, that though in many arts and sciences, improvement has advanced in a step of regular progression from the first moment of their invention, in others it has kept no pace with time, and we look back to ancient excellence with wonder, not unmixed with awe.

Medicine seems to be one of those ill-fated arts, whose improvement bears no proportion to its antiquity; for it is lamentably true, that although Anatomy has been better illustrated, the Materia Medica enlarged, and Chemistry almost created since the revival of letters, we are very little before the ancients in the penetration which discovers the precise nature of a disorder, or in skill to apply the remedy.

Perhaps it may be on account of those very advantages, that modern practitioners are inferior to those of ancient times. We have so many collateral helps, that we seldom study Nature in her original character, but see her at second hand, often deformed by the injudicious narrator, or disguised and fashioned by the plastic hand of the Theorist, to suit a favourite hypothesis.

Hippocrates, the father of his art, and the prince of physicians, has said, that a physician should be the minister of Nature; and is it not our departing from Nature, in compliment to new theories, that modern practice appears so diminutive, compared to that of the illustrious native of Cos? A review of his mode of treating acute disorders may justify these remarks.

The celebrated Grecian's first principle was, "That the end of physic is either to carry off diseases, or to moderate their violence."—Accordingly, his indications in acute diseases were "to mitigate the symptoms, when too violent, and to assist Nature in her business of concoction or evacuation of the febrile matter."—Having taken these indications from Nature, when the fever was irregular, and had no certain type, he waited without doing any thing till it became regular, and then he proceeded according to the predominancy of the symptoms.

Considering a fever in every circumstance as an effort of Nature to rid herself of a load, he never attempted *to cure it*, —that is, he never wished to arrest the febrile commotion altogether.—He restrained these efforts by bleeding in the beginning of acute disorders; but not to promote an artificial

criſis, (as has been imagined) or otherwiſe he would have bled on the critical days, and not in the beginning of a fever.

Another method Hippocrates took to moderate the violence of acute diſeaſes, particularly pleuriſies, peripneumonies, and ardent fevers, was by giving cooling and emollient clyſters. In pneumonic complaints he limits the exhibition of theſe to the firſt four or five days, as no evacuation was to be excited after the patient began to expectorate, leſt he ſhould die of a ſuffocation. To this general rule, however, he inſtances exceptions in his own practice.——The third object was to regulate the patient's diet.

For this purpoſe he made uſe of two ptiſſans:—Pearl barley diſſolved in ten or fifteen parts of water was called ptiſſana tota, or whole ptiſſan; when this was ſtrained, and the thinner ſeparated from the thicker parts, it was called ptiſſana colata, or the juice of ptiſſan. His rules for giving it were theſe:—the more acute the diſeaſe, the more thin and watery the diet; and it ought to be thinneſt about the height of the diſorder. In ardent fevers he ſeldom gave ptiſſan till after the criſis; and he directs, in one paſſage, not to give it till there are ſigns of concoction in the urine. But, in fevers attended with more moderate ſymptoms, he directs whole ptiſſan to be given from the firſt acceſs, to ſupport the patient's ſtrength. Throughout the whole courſe of the fever, he directs diluting liquors to be given in the greateſt abundance. To promote expectoration in pleuriſies and peripneumonies, he orders the ſtrained ptiſſan to be given mixed with honey, and directs, when the matter begins to be expectorated, to apply warm fomentations and liniments externally, to promote a maturation of it. Sweats he conſidered as a critical evacuation when they appeared on the critical days; he therefore recommended artificial means to procure them; as, warm bathing, diluting freely, and ſometimes anointing the patient with oil. With a view to carry off the febrile or peccant matter, Hippocrates ordered purges at the beginning and end of acute diſorders; he deferred it, however, generally till the fourth day, that he might learn more diſtinctly the nature of the fever. In diſeaſes ſtrictly inflammatory, he abſtained from purging while the urine was pale and crude, a ſign that the febrile matter was fixed. He was againſt all evacuations during the middle ſtage of acute diſorders; and ſays, "that as the ſymptoms are moſt violent about the height of a diſeaſe, we ſhould rather aſſiſt Nature in the ſtruggle, than weaken her by any evacuations at that time;"—this, however, applies to continual fevers, for he purged in a tertian on the eighth day.—With reſpect to purging at the concluſion of fevers, he directs, that when they terminate

terminate by resolution, or a simple concoction of the febrile matter, and thereby changed into a healthy state, no purge should be given afterward. But if there has been a critical concoction or evacuation, he directs a purge for fear of a relapse *from an imperfect crisis*.

Such was the practice of this admirable physician. He calls his art "the most excellent of all arts," and it lost not its value in the hands of such an artist.—Penetrating and indefatigable, he studied Nature closely. No symptom, no indication escaped him; and by restricting his practice to the suggestions of the complaint, he anticipated their approach, and seldom failed to give relief.

His doctrine, however, though it stood its ground for four hundred years, was found too simple for the profound speculators of after-times; and Asclepiades rejected it and set up another, which happily did not last long, but was overturned by Themison, who cured all diseases by bleeding, purging, and cold water. Theories now multiplied fast, and new systems of medicine appeared every day. At length came Galen, who seemed born for the restoration of the Hippocratic practice. In acute diseases particularly, he never failed to tread in the steps of his illustrious predecessor, whether with regard to assisting or restraining Nature; purging at the access and decline of fevers, ordering expectorating medicines after concoction, or any other dicta of so eminent an example.

After the revival of the Hippocratic practice by Galen, it stood firm for many centuries; but it was once more destined to sink under opposition. Argentarius, Pereira, and Fernelius began the attack on the Galenic mode, which gradually declined till Paracelsus and Van Helmont gave it a fatal blow. After a second eclipse of its merit it has partially revived, within the last century and a half, under the fostering hands of Sydenham and Boerhaave, who incorporated the ancient practice with their own, and who, we may safely add, owe more of their reputation to the diligent study and imitation of Hippocrates, than to any other cause.

A popular writer observes, that "the difference between a good physician and a bad one, is very great; but the difference between a good physician and *none at all*, is oftentimes very little. Hippocrates was a medical sentinel; he was all eye, ear, and vigilance. Every thing relative to a complaint was minutely attended to; and with a dexterity of inference, unknown to modern practitioners, he knew what was to be done, and the precise moment for doing it.

Theories are but the butterflies of the day—they buzz for a while, and then expire. We can trace, for many centuries past,

paſt, one theory overturning another, yet each in ſucceſſion promiſing itſelf immortality. Who imagined that the doctrine of phlogiſton was to be overturned ſo ſoon? — In fifty years more it may be forgotten.

But the practice of Hippocrates will endure for ever; for it is founded in truth, whoſe immutability neither time nor accident can control.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

WITH much pleaſure I embrace the earlieſt opportunity to announce to the medical world, through the channel of your Journal, that I have ſucceeded in the cure of ſcurvy by the Citric Acid, in the *concrete form*, as prepared by Mr. Coxwell of Temple Bar, after the manner of Scheele.*

The hiſtory of health in the fleet for the laſt ſeven years has afforded us ſo large a ſtock of facts, that every information ſeems to have been obtained that could be wiſhed, for the effectual prevention and cure of ſcurvy; but there was ſtill a *deſideratum*. Some preparation of lemon juice was wanted, on a large ſcale, that could be preſerved in every climate for the longeſt voyage, and that ſecured all the antiſcorbutic virtues of this vegetable acid. Mr. Coxwell's preparation, in the form of cryſtals, poſſeſſes all theſe qualities: I alſo underſtand, that he can ſell it at a price lower than the common juice, as now ſupplied to the King's ſhips; and I can vouch, that its powers againſt this ſea diſeaſe, are equal to *any effect I have ever obſerved from the recent fruit in its moſt perfect ſtate*.

It is highly gratifying to myſelf, to find that the navy and commercial part of the country are now furniſhed with the laſt article that is neceſſary to preſerve the lives of ſeamen againſt a diſeaſe that is inſeparable from long voyages. Let me, however, remind the officer, the navigator, and merchant, that the crews of ſhips ought, nevertheleſs, to be recruited, at as ſhort intervals as poſſible, with freſh meat and eſculent vegetables. I ſhould always like to ſee the lemon, in all its conditions, rather truſted in the cure, when we can do no

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* Vide Crell's Journal for 1784.

no better. A long uſe of it weakens the digeſtive powers, and impairs muſcular action; and thus adds another cauſe to the liſt of evils to which ſeamen are expoſed, in bringing on that premature old age ſo generally among them.

It takes from ſixteen to eighteen parts of water to bring Mr. Coxwell's acid to the ſtandard of lemon juice. The gums of the patient never bled after its firſt adminiſtration; they became florid on the third day; the colour of large livid blotches on the third day, alſo, were evidently different in their hue, and ſoft to the touch: other ſymptoms declined in the ſame proportion; and all this during the uſe of the ſhip's common fare of ſalt meat, &c. in order to ſhow its efficacy in the moſt forlorn ſtate, and where the diſeaſe was well advanced. We ſhall, on ſome future occaſion, detail the firſt caſes; where it will be obſerved, that we have carefully avoided thoſe errors into which others have fallen, on holding up new remedies againſt ſcurvy.

The mind of the philoſopher will naturally offer ſpeculations on this intereſting ſubject; that an acid, of vegetable origin, after undergoing the proceſs of ebullition, combination with a calcareous baſe, and, at laſt, diſplaced by the ſuperior attraction of another acid, ſhould retain the ſame effect on animal life, which it had in its recent form. But, "*we are fearfully and wonderfully made*, and here all conjecture muſt ſtop.

The medical readers of your Journal, who are connected with the mercantile world, will naturally extend this information. In the Eaſt India ſervice, and the Southern Whale Fiſhery, ſcurvy is a frequent diſeaſe. The concentrated ſtate of this preparation of lemon juice, reduces the ſhip load to the ſize of a portmanteau. A beſieged garriſon might be relieved by dropping from a balloon a few pounds of it, when ſcurvy rendered it untenable, as happened with Fort St. Philip, at Minorca, laſt war. I am,

GENTLEMEN,
Your moſt obedient humble ſervant,
T. TROTTER.

Plymouth Dock,
July 13, 1800.

P. S. Since finiſhing this letter, I have been favoured with the following remark, by one of the reſpectable and able ſurgeons who has been engaged in this inquiry. He ſays, "I muſt now confeſs, that I have been not a little aſtoniſhed at the effects of the *concrete acid*, they have far ſurpaſſed my moſt ſanguine expectations: the proportion of an ounce of *concrete juice* of lemon to a pint of water, as uſed by me, taſtes ſtronger of the *citric acid* than the common lemon juice.

for direct operative detachment of the placenta, (that ultimate occasion having never presented in my own practice, in the course of many hundred cases) it varies from the latter, in proceeding immediately to assist the uterus by moderate co-operation, in exonerating itself of what may be considered as a morbid state of excitement.

It has twice occurred to me to be called to assist gentlemen, who, adopting the doctrine of patiently awaiting the spontaneous exertions of the uterus for the expulsion of the placenta, had, in both instances, allowed it to remain upwards of twelve hours, during the whole of which time, inefficient pain had recurred at intervals. The mode of assistance herein proposed, was immediately employed; and, in both cases, within half an hour, the placenta was safely removed, without superinducing any sensible degree of additional irritation; nor did hæmorrhage or any other inconvenience supervene.

It is uncertain how long the placenta, in the instances alluded to, might have been retained; probably, until the inadequate contractions of the uterus had effected a partial detachment, and the consequent hæmorrhage had compelled the *patient* practitioners to furnish manual aid. The mental suffering of the patients would have been cruelly aggravated by longer delay, and no compensation could have accrued from superior advantages by ultimate natural expulsion.

Dr. Squire has adduced a formidable legion of authorities in support of his opinion,* and appears, very consistently, to have assumed no small portion of confidence from the respectable mass of suffrage he has cited. It would be equally to calumniate Nature and the defenders of her competency, to declare, that artificial aid is *uniformly* necessary in placental delivery. In fact, it is but very rarely, that art need be resorted to, either to avert or remedy error. Indeed, the mere possibility of accidental deviations from natural rectitude, affords the only justification that can be assumed for the ordinary practice of midwifery. It not unfrequently occurs, that women, even in civilized nations, safely undergo parturition in solitude; nor has the obstetric art been familiarly known in countries where vicious refinements have not perverted the order of Nature, and introduced the various physical and moral evils of licentious civilization.

As the practice of midwifery is not uniformly necessary, and only occasionally required to countervail constitutional degeneracy and mal-conformation, chiefly originating from the corrup-

* Vide Medical and Physical Journal, No. xv. pp. 482—3.

rupt inſtitutions and habits of art; it is peculiarly important, ſtrictly to regard the legitimate objects of aſſiſtance, that ſuitable aid may be correctly and promptly rendered when indiſpenſably requiſite; and not be uſeleſſly, or perniciouſly obtruded, on what is excluſively the work of natural power.

The ordinary progreſs of parturition, under natural preſentation, cannot be advantageouſly aſſiſted by art; due patience will ultimately evince the fidelity of Nature to her engagement.

The ſupport of the perineum is a precaution more worthy of the kind office of a kindred female, than of the ſolemn parade of obſtetric ſkill. The benefit afforded in ſecuring againſt its laceration, by moderating and regulating the uterine impulſe, is imaginary. Scarcely a calculable probability exiſts of that event occurring; and the reſiſtance uſually oppoſed to it, could not prevent the accident, while it may injure the uterus by counteracting its protruſive efforts. The expulſion of the placenta ſafely admits of definite acceleration; and, in natural parturition, its ſeaſonable removal may be truly ſaid to conſtitute the ſole utility of midwifery practice.

In a large majority of caſes the placenta would, no doubt, be ſpontaneouſly extruded; but it will not unfrequently happen that much anxious protraction of time, alarming hæmorrhage, and unavailing irritation, may be happily prevented by its early removal.

The mode propoſed, approaches to an imitation of Nature in ſuſtaining that tenſive ſtate of the uterus which preceded the expulſion of the child, and which would be continued in ſome degree after birth by the infantile ſtruggles, were the funis to remain unſevered.

A firm perſuaſion, founded on ample *experience*, of the perfect ſafety and expediency of this practice, is my only motive for ſubmitting it to public conſideration. It need be but tried to be approved, and its uniform adoption would end all ambiguity and poſſible hazard relating to *placental delivery*. I am,

GENTLEMEN,

Your's, reſpectfully,

ROBT. KINGLAKE.

Chilton super Poldon,
July 12, 1800.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

AS the profeſſed deſign of your valuable work, is to conſtitute a vehicle of uſeful information in the various departments of phyſic, for the profit and entertainment of your numerous readers; permit me, through the ſame channel, to ſuggeſt a few thoughts, with all due deference, on a ſubject which I do not recollect to have been hinted at, in any former number of your miſcellany.

The ſubject on which I purpoſe to offer a few remarks, is, notwithſtanding it may to ſome appear trivial, found to be of the utmoſt importance in medical practice, viz. *on the neceſſity and advantage of gradually augmenting the doſe of active remedies in the treatment of obſtinate chronic diseases:* An advantage, no doubt, well known to the more ſagacious and experienced part of the profeſſion, but, perhaps, too much neglected by the raw and injudicious; in conſequence of which, I apprehend, that not unfrequently much credit is loſt on the part of the practitioner, as well as benefit on that of the patient.

It ſcarcely needs to be obſerved, that that ſenſative organ, the ſtomach, through the medium of which the influence of medicines is conveyed to the whole ſyſtem, loſes, in a great meaſure, the ſtimulus of the medicine applied, after it has been accuſtomed to it for a given time; and hence a reinforcement becomes inevitably neceſſary, by an augmentation of the doſe, in proportion as it is capable of receiving it, by which means the curative plan is proſecuted with conſiderable advantage, and the ſymptoms of the diſeaſe are moſt likely to be ſubdued.

In no inſtance, perhaps, is this obſervation more fully confirmed, than in the treatment of *chlorotic patients*, where a long courſe of ſteel, in conjunction with tonic bitters, is indiſpenſably neceſſary. In this caſe, the ſubjects are for the moſt part in a ſtate of great debility, the ſtomach extremely irritable, and ill diſpoſed, at firſt, to retain the nauſeating quality of the *ferrum*, in any form in which it can be adminiſtered, and in ſuch a doſe as is requiſite to produce the deſired effect. Therefore, by commencing the courſe with ſmall doſes, and gradually increaſing the quantity during the treatment, we find the ſtomach reconciled to it, and the patient ſeldom complains of nauſea or ſickneſs; but, on the other hand, derives every benefit, generally ſpeaking, by this mode of its adminiſtration, which it is expected to communicate to the ſyſtem.

The ſame obſervation will, it is preſumed, hold good, as it reſpects

reſpects the adminiſtration of other active and important remedies; ſuch as, *hydrargyrum*, *cinchona*, *opium*, *cicuta*, *ſcilla*, &c. where the caſes demand a long continuance of their uſe. Nor is the hint conveyed, as containing in it any thing new, or not already known, but generally too much neglected; for the writer is well aware of the highly improved ſtate of phyſic in the preſent day, and of the numerous practitioners who are juſtly deemed an honour to the profeſſion. Therefore he flatters himſelf, that the idea he has ſuggeſted will not be conſtrued *by them* as any indirect reflection on their ſuperior ſkill, but as an humble attempt to ſerve the general cauſe, and to promote the good of thoſe, who place an unlimited confidence in, and anxiouſly expect to receive benefit from, their medical attendants. I am,

GENTLEMEN,

Your's, reſpectfully,

H. DAVIES.

Piccadilly,
July 9, 1800.

On the Medical Uſe of Phoſphorus.

PHOSPHORUS, whoſe uſe was introduced into medicine about fifty years ago, is known as the moſt powerful exciting remedy which we poſſeſs. Several phyſicians have tried it, with more or leſs ſucceſs, in all caſes where a high degree of nervous debility prevails; and accordingly, in nervous fevers, palſies, impotentia virilis, epilepſies, &c. alſo in arthritis nodoſa et atonica, it has proved very efficacious; and it likewiſe deſerves to be uſed in caſes of perſons poiſoned with lead or arſenic. There exiſts, at leaſt, an inſtance of a perſon, who having been given poiſon in Italy, (probably aqua toffana,) became quite emaciated, his nails and hair fell off ſpontaneouſly, and his life was only ſaved by phoſphorous. Its effects are at the ſame time in a conſiderable degree diuretic and diaphoretic.

Experience has, however, ſhown that the application of this remedy requires the utmoſt caution, and it may ſometimes prove very dangerous if proper care is not taken; as it has been obſerved, either to cauſe a vehement inflammation in the ſtomach and bowels, accompanied with very burning pains in the regio hypochondriaca, and often terminating in death, or by producing indurations, or ſcirrhus of the ſtomach, which occaſion chronic cardialgies, indigeſtions, an habitual vomition of whatever is taken, emaciation, and hectic death. Theſe ill

conſequences

conſequences are in a great meaſure owing to the mode in which it is adminiſtered; either by giving it in ſubſtance, or in too great a doſe; as, in the firſt caſe particularly, the minuteſt particle of it may, by adhering to the ſtomach, produce an inflammation, or at leaſt an induration.

As for the doſe, it has been obſerved, that it never muſt exceed two grains in 24 hours, and a burning pain or ſenſation was always perceived whenever it was given in a greater quantity, but generally one grain in 24 hours will be ſufficient to produce the deſired effects.

The form in which it is to be exhibited ought to poſſeſs the quality of containing the phoſphorus quite diſſolved, and at the ſame time of obtunding its too dangerous irritation upon the ſtomach. The forms hitherto uſed were a mixture with a conſerve, which is of all others the moſt improper, becauſe the remedy is applied here in ſubſtance, and may of courſe eaſily bring on the above mentioned ſymptoms; a ſolution of it in oil, which, though otherwiſe very proper, is too diſagreeable to take; a ſolution in ether, or naphta vitrioli, in which the phoſphorus entirely diſſolves; but, by this combination, its heating and irritating qualities are exceedingly increaſed; and as only eight grains of phoſphorus are ſoluble in one ounce of the ether, 120 drops muſt be taken, only to bring one grain of it into the body, which in moſt caſes would be too dangerous. However, this naphta phoſphorata may be of great benefit or uſe in a very high degree of nervous debility, combined with a total want of ſenſation.

The following form of giving phoſphorus internally, will therefore be the moſt proper, on account of containing it diſſolved and equally divided throughout, and having it ſufficiently involved in mucilage, to prevent any ill conſequences from a local irritation of the ſtomach even in very ſenſible conſtitutions. The phoſphorus is rubbed with ſweet almonds, or a ſufficient quantity of gum arabic, to make an emulſion, and by an addition of ſpiritus nitri dulcis, or liquor anodynus, the taſte and ſmell of the phoſphorus is rendered leſs diſagreeable.—

℞. *Phoſphor. urinæ gr. ii. ſubigantur longa triturationc cum mucilagine gr. arabici q. s. ut fiat eum aquæ fontan unc. vj. emulſio, cui adde ſyrupe de althaea unc. j. liquor. anodyn. miner. Hoffmann. gutt. xxx.* D. S. *omni biborio cochlear ſumendum aut plus. pro re nata.* In this way a very efficacious ſolution will be obtained, which ſhines in the dark, and is agreeable enough to be taken. *(From Hufeland's Practical Journal, vol.* vii. *No.* 3, 1799.*)* Of the external uſe of phoſphorus, particularly in caries oſſium, we ſhall, perhaps, ſay ſomething in one of the future numbers of this Journal.

CRITICAL

CRITICAL RETROSPECT

OF

MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

Tranſactions of a Society for the Improvement of Medical and Chirurgical Knowledge.

[Continued from our laſt Number, pp. 67—71.]

WE renew our Analyſis of this Volume with great pleaſure, as it contains ſeveral important papers; and we ſelect the following, becauſe it furniſhes a very uſeful hint, and from which much advantage may be derived in the practice of midwifery.

" *Obſervations on the Management of Caſes in which the Face of the Child preſents towards the Os Pubis, by* JOHN CLARKE, M. D.

" Every perſon who has been engaged in the practice of midwifery knows, that if in labour the face of the child lies towards the ſymphyſis pubis, conſiderable difficulty is thereby frequently occaſioned.

" More force muſt be exerted by the woman, in order to expel the head ſo ſituated, and the labour will be protracted to a far greater length, than when the head is in the uſual poſition, with the occiput towards the os pubis.

" The ground of this difficulty is, becauſe in this ſituation, the whole of the face muſt deſcend through the pelvis, before any part of the head can emerge from under the ſymphyſis pubis, and becauſe the bones of the face are incapable of undergoing any alteration from preſſure.

" On the other hand, when the occiput lies towards the os pubis, the different bones, of which the poſterior part of the head is compoſed, are capable, in conſequence of the incomplete oſſification at the ſutures, of very great alteration in their relative ſituation, ſo that the form of the whole head may become materially changed, and be better adapted to paſs out of the pelvis.

" Thus the ſame head, from this variety in its poſition, may offer a very different degree of reſiſtance to the powers of expulſion.

" If the head ſhould, unfortunately, be placed with the forehead towards the os pubis, and the woman ſhould be ſtrong, her exertions and pains muſt be more violent in proportion to the increaſed reſiſtance: but the labour, though prolonged very much beyond the ordinary bounds, may at length be finiſhed by her own efforts. But in other inſtances the difficulty may be ſo conſiderable, that her ſtrength

strength may be worn out without accomplishing the birth of the child; and she must either remain undelivered, or artificial force must be substituted for the natural powers, which are found to be defective.

"This unfavourable position of the head may be detected by a very little attention to the situation of the anterior fontanelle, and of the sutures.

"If, on examination, the anterior fontanelle be felt, and the sagittal suture be found running from it towards one of the sacro-illiac joints, or directly towards the concavity of the os sacrum, there remains no doubt that the face will be born towards the symphysis pubis.

All the best writers upon the practice of midwifery have taken notice of this cause of difficulty in labour; but they have been contented with describing it, without suggesting any means more especially suited to this case. A reliance upon time, when the woman has strength, and the application of instruments, when she has not, comprehend all the practical advice which is contained in their works.

"Chance first led me to the knowledge of the fact, that, in some cases, this position of the head can be remedied without subjecting the mother to any additional pain, or the child to any kind of danger.

"In a case where I had reason to expect some danger, I was desirous of knowing the precise position of the child's head, and whether it was in a situation which would admit of delivering safely with the forceps, if this should become indispensably necessary. I found the face turned towards the groin, and on endeavouring to ascertain whether the ear could be felt, I was obliged to make a firm pressure against the side of the head with my finger.—In doing this it appeared to be moved a little. Aware of the great advantage which might arise to the patient if I could succeed in bringing the occiput to the pubis, whether she were ultimately delivered by nature or by art, I continued to make pressure upon the side of the head, till in the space of a few minutes the occiput was brought to the groin from the sacro-iliac joint of the same side; the consequence of which was, that, instead of the face, the occiput was born towards the pubis, and thus considerable pain and difficulty were avoided.

"Reflecting upon the event of this case, I thought that the ready alteration in the position of the head might, in this instance, depend upon the pelvis of the woman being very large, relatively to the volume of the child's head, and that a similar change could not be produced by the same means in other cases of a similar presentation.—I determined, however, to make a trial in the next case which should occur. Another case soon occurring, this practice was attended with equal success.

"I have now met with fourteen cases, in thirteen of which the practice has succeeded; and as some years have now elapsed since the first case, I think myself fully authorised in recommending this method

method to be always purſued, when the face is found in the ſituation above deſcribed. A great deal of pain, and much time, will be ſpared to the patient by theſe means.

"The manner of effecting the change is, by introducing one or two fingers between the ſide of the head, near the coronal ſuture, and the ſymphyſis pubis, and preſſing ſteadily againſt the parietal, or frontal bone, during a labour pain. When this is done, it will be found, in moſt caſes, that the head yields to the preſſure, till at length the occiput is brought to the groin. This being effected, the reſt ſhould be left to the natural efforts of the woman.

"It is unneceſſary to obſerve, that this alteration will be more eaſily produced, when the face lies towards the groin, than when the ſagittal ſuture runs directly backwards to the ſacrum: but even in this caſe, the change of poſition may be effected with much more facility than I before hand ſuppoſed to be poſſible.

"When the pelvis happens to be large, or the head of the child ſmall, as there will be more room for the head to turn, the difficulty of doing it will become proportionably leſs.

"In ſome inſtances, where the pelvis is ſmall, or the head large, or where the Face is directly turned to the pubis, it may be impoſſible to change the direction: but theſe caſes are comparatively rare; and as no harm can ariſe from it, the attempt may always be made."

"*A Caſe of Pregnancy, in which the Ovum had become diſeaſed, and was entirely filled with ſmall Hydatids.* By EVERARD HOME, *Eſq.* F. R. S.

"THERE are many caſes mentioned of the placenta loſing its natural ſtructure, and becoming a congeries of Hydatids; ſeveral of theſe have been publiſhed: but in all the inſtances on record, as far as I am acquainted with them, the patient had miſcarried, and the placenta was examined after being ſeparated from the uterus, ſo that the diſeaſe could not be exactly aſcertained.

"The following caſe, in conſequence of its melancholy termination, afforded an opportunity of the parts being examined in their natural ſituation, and of determining preciſely the ſeat of the diſeaſe.

"Elizabeth Yeoman, thirty years of age, was delivered of her ninth child on the 22d of December, 1797, and recovered from her lying in in three weeks, as ſhe had uſually done after former labours. She continued in perfect health till the 1ſt of Auguſt, 1798, when a flooding came on, which was ſuppoſed to be an uncommon flow of menſtrual diſcharge; this continued for ten days; it created an alarm, and an accoucheur was conſulted.

"He found, upon enquiry, that ſhe had not menſtruated before for twelve weeks, and there was an evident enlargement of the abdomen; he had therefore no doubt of her being pregnant, and thought ſhe had advanced to the third month. From this expla-

nation of the case, the present hæmorrhage appeared to be a flooding preceding abortion.

" The ordinary means for restraining the flooding were used, and on the 14th it had entirely stopped. She was now attacked by a vomiting, attended by a hot skin, and a pulse at 109. These symptoms were relieved by a gentle emetic, and saline draughts with rhubarb.

" On the 20th, there was a return of the vomiting, with spasms over the whole abdomen, and the general bulk of the belly became much increased; these symptoms resisted all means used for their relief, and she died on the 22d, in the evening.

" Upon inspecting the body after death, the womb appeared to be of the size that it usually is five months after conception. The os tincæ was a little dilated, receiving with tolerable ease the end of the finger.

" A longitudinal incision was made through the anterior part of the uterus, extending from the os tincæ to the fundus; this incision was continued through the membranes of the ovum, but no cavity was found, no fœtus presented itself, and every part was occupied by an infinite number of hydatids of different sizes, from that of a pin's head to the size of a common grape, scarcely any of them being so large as a full sized grape. They were attached to the nearest surface, and to every part of the amnion equally.

" Upon separating the membranes composing the ovum from the uterus, which was easily done, the situation of the placenta was readily ascertained; it was near the os tincæ on the posterior surface of the uterus, and was unattached, a separation having taken place during the patient's life time; this had occasioned the flooding, which gave the first alarm respecting her safety. The surface next the uterus had not its usual shaggy appearance, but was nearly smooth; it scarcely projected beyond the membranes of the ovum, and was about two inches in diameter.

" The mass of hydatids which filled the ovum were all connected with one another; were very tender, and readily broke down when handled. This mass of hydatids was very different from those met with in the liver, which are spherical, and those with long necks and heads, found in the brain of sheep; they were connected to the surface of the membrane, and to those hydatids with which they were united, by short pedicles or necks. To ascertain whether there was any appearance of a fœtus, I examined the whole with minute attention, but could not perceive the smallest remains either of one, or of a funis; nor could I, on the inner surface, distinguish any thing like the ordinary structure of the placenta.

" The hydatid structure of the placenta, as a disease to which that part is liable, is, I believe, very well known, and specimens of it are preserved in different collections of anatomical preparations. My attention in this case was directed to the investigation of the disease; and, from the facts I have stated, it does not appear to be a change in the structure of the placenta, but a general affection

tion of the amnion. When this disease takes place, the natural healthy actions for the support of the fœtus are so much impeded, that its growth is arrested. This evidently happened in a case published with an elegant engraving of the placenta and fœtus, by Dr. Denman; and when the patient does not early miscarry, the fœtus disappears; and in all the instances where miscarriage has taken place in a more advanced stage of the disease, I believe no fœtus had been found."

The following is an excellent example of the effect of the application of Gastric Juice to sores.

"*On the Use of the Application of Gastric Juice to Sores. By* JOHN HARNESS, M. D. *Physician to the Fleet.*

"MR. Thomas Corben, boatswain of his Majesty's ship Egmont, was, on the 31st of July, 1796, received into the Dolphin hospital ship, in consequence of a very bad ulcer of the right leg, which was fully six inches in length and four in breadth. The surrounding integuments were detached for some considerable way, and their margin, with very much the greater portion of the surface of the ulcer, was in a sphacelated state. The matter discharged was so extremely acrid, as to excoriate every part which it touched, and had insinuated itself through the whole length of the interstices of the gastrocnemius and soleus muscles. From between these muscles, which were detached from the bone nearly the whole length of the ulcer, a very large quantity of a most offensive matter was discharged, a considerable portion of which lodged in a cyst formed by the detached integuments on the posterior and inferior parts of the leg.

"There was a very great tension the whole length of the extremity.—The general health was much impaired.

"Having, in the course of a long and extensive practice, been too frequently a witness to the inefficacy of the applications hitherto made use of in the navy in the treatment of scorbutic ulcers (viz. cytric acid, bark, myrrh, rhubarb, and opium, separately or variously combined) and more particularly in warm climates, where sphacelus and erosions have taken place in any considerable degree, to which every seaman is peculiarly liable; I was induced, from the very unfavourable appearance of the case above related, to have recourse, with the concurrence of Mr. Gray, surgeon of the hospital ship, to the *Gastric Fluid of graminivorus animals*, which I knew could be readily obtained from the bullocks and sheep killed daily for the use of the fleet. From a bullock killed in the evening, nearly three pints of the juice were obtained, with part of which the surface of the ulcer was washed, as well as all the sinuses, by injecting the fluid into them in different directions by a syringe, with a long and slender tube Superficial dressings of lint were then applied, and particular attention was paid to prevent, by compresses and bandages, a further insinuation of matter, as well as to

preſerve the parts in contact, as far as their diſeaſed ſtate would admit of, that every advantage might be derived from the adheſive inflammation which I expected the remedy to excite. The above means were purſued night and morning. On removing the dreſſings upon the third day, the whole of the ſphacelated parts was thrown off, which expoſed a large portion of the tibia in two different places, to which pledgets of lint dipped in the fluid, were applied, which not only appeared to prevent the injuries uſually attendant on thoſe caſes, (viz. diſcolouration and exfoliation) but on the contrary, in the courſe of eight days, the parts thus expoſed were entirely covered by new granulations, and at the expiration of fourteen days, all the ſoft parts were perfectly reunited, and the ſurface of the ulcer reduced to a ſore of about two inches and a half in diameter, with its granulations ſmall, and compact, and of a beautiful florid colour. It is at preſent perfectly healed, and the patient, although a very luſty man, enabled, by the aſſiſtance of an elaſtic bandage, to attend to the duties of the ſhip.

" After the three firſt dreſſings, the Gaſtric Fluid of ſheep only was uſed, not being able, from the ſhip being at ſea, to obtain more from bullocks. The Fluid, if poſſible, ſhould be procured freſh every day.

" To remedy his general ill health, an aperient medicine was firſt given; after which he took half a drachm of bark in two ounces of the decoction every ſix hours, with directions for him to make uſe of as many lemons and onions in the courſe of the day as his ſtomach would eaſily bear. It was aſtoniſhing to obſerve with what rapidity he regained his ſtrength after the ſphacelated parts were thrown off.

" I have ſince had the pleaſure of finding the application of the Gaſtric Fluid ſucceed in more than a hundred caſes of ſphacelus, and the teſtimonies given of its peculiar good effects in theſe caſes by Mr. Jones, ſurgeon of the Naval Hoſpital at Baſtia, and by Meſſrs. Bead and Buck, two of his principal aſſiſtants, convince me of the importance of making its efficacy generally known.

" P. S. I have at preſent a patient in the Dolphin, a ſeaman belonging to the Barfleur, Vice-Admiral Waldegrave, who, from being confined to his bed by typhus fever, became excoriated in three different places, the whole of which terminated in extenſive mortifications; the ſloughs of which are entirely removed by the Gaſtric Fluid, and the patient ſufficiently recovered to walk about.

Obſervations on Mr. Simmons's Detection, &c. &c. with a Defence of the Ceſarean Operation, derived from Authorities, &c. &c. A Deſcription of the Female Pelvis; an Examination of Dr. Oſborn's Opinions relative to Embryulcia; and an Account of the Method of Delivery by Embryotomy. Illuſtrated by numerous Engravings. By JOHN HULL, M. D. Member of the Corporation of Surgeons, and of the Phyſical Society of London; of the Natural Hiſtory Society of Edinburgh; and Secretary of the Literary and Philoſophical

Philoſophical Society of Mancheſter. Pr. 9s. 6d. pp. 480. Bickerſtaff and Clarke, London.

When men of ſcience differ in opinion on ſubjects of the utmoſt importance to the medical profeſſion, and to the world at large, and confine the debate cloſely to the matter in queſtion, the public are always benefited by it, unexpected lights ſpring from the conteſt, or at any rate the queſtion has a better chance of being clearly underſtood. But it becomes extremely painful to us, who are ſolicitous for the health of the public, and the promotion of ſcience, to obſerve two gentlemen of acknowledged ingenuity "*throwing dirt at each other*" with ſo little good reſulting from it; and we plainly perceive, if this quarrel *deſcends* a very little lower, who *muſt* decide "*when Doctors diſagree.*"

Dr. Hull appears to have been at infinite pains in collecting materials for his book, and has furniſhed the reader with many particulars, which will gratify his curioſity; however, the Author's deſign will be beſt explained in his own words.

"From the ſecond part both information and inſtruction will, I hope, be derived. It contains the ſubſtance of a work announced for publication, under the title of a Treatiſe on the Ceſarean Operation, previouſly to Mr. Simmons's unprovoked attack upon me. In this part I have criticiſed a very curious letter, addreſſed by Mr. S. to the Editors of the Medical and Phyſical Journal.—I have given a brief hiſtorical account of the Section of the Symphyſis Pubis, and of the Ceſarean Section, as practiſed upon the dead and living female, with tables of all the ſucceſsful and unſucceſsful foreign caſes, which I have been able to collect.—I have pointed out the circumſtances, rendering the operation neceſſary; and have laid down directions for accompliſhing the delivery under circumſtances ſuppoſed to require the performance of the Ceſarean operation; but in which it is neither neceſſary nor admiſſible.—I have entered into an enquiry concerning the moſt proper time for having recourſe to the operation; the beſt method of performing it; the ſources of danger; and the ſubſequent treatment of the patient.—I have endeavoured to make a fair eſtimate of the comparative value of the life of the fœtus in utero, and the mother, according to the different conditions of the latter at the time of parturition. I have examined the opinions and precepts of Dr. Oſborn, relating to hyſterotomy and embryulcia; I have ſhewn both by reaſoning and actual experiments, that they are ill founded; and I have attempted to lay down rules and directions, that are leſs exceptionable.—I have entered into a diſcuſſion of the propriety and advantages of inducing premature labour, with the view of ſuperceding the neceſſity of embryulcia and hyſterotomy.—And I have introduced a ſketch of the female pelvis in its natural ſtate, with an account of the diſtinctive characters of its deformities, and an enumeration of the cauſes, by which theſe are induced, and of the means, by which their different degrees may be moſt accurately determined."

The comparative eſtimate of the value of the lives of the mother

ther and fœtus, has been amply discussed by Dr. Osborn, in his Essay on Laborious Parturition. In these Observations, Dr. Hull has examined the subject with considerable ability, and, we think, has justly set a higher value on the life of the infant than Dr. Osborn, although he has not weakened (nor do we believe he means to lessen) our consideration for that of the mother. The learned author next proceeds to treat on the cases that may require the Cesarean operation; and he says, "It may be stated in general terms, that every circumstance *which can render delivery per naturales vias impracticable*, ought to be considered as requiring the Cesarean operation. What these circumstances are, writers are not agreed. For, whilst some authors contend, that no case, except an extreme degree of deformity and contraction of the pelvis can render the operation necessary, others enumerate a great variety of cases, as indicating it.

"The cases which I propose to examine, are: 1. Deformity of the pelvis. 2. Wounds of the *uterus*. 3. Rupture of the *uterus* or *vagina*. 4. Extra-uterine conceptions. 5. Obliquity of the *uterus*. 6. *Hernia* of the *uterus*. 7. Tumours, &c. affecting the *os uteri* and *vagina*. 8. Strange or foreign bodies diminishing the capacity of the pelvis. 9. Convulsions or Epilepsy. 10. Preternatural position of the *fœtus*. And 11. Monstrous conformation of the *fœtus*.—Of these I shall consider the first more particularly, and the others only in a general way"

On all these topics the author has taken a full view, and illustrated his arguments with several plates, most of which are well executed.

As much stress in the whole of the debate has been laid on the case of Elizabeth Sherwood, related by Dr. Osborn in his Essay on Laborous Parturition, we quote the following passage, which states the *degree* of difficulty in that particular instance in its proper light.

"Whether in any of the cases, wherein the Cesarean section has been had recourse to in Great Britain, the delivery could have been accomplished by any means with more safety to the mother, I am not able to determine; because we are not in possession of the dimensions of the pelvis in all of them. But, in every instance, where the dimensions have been given, the degree of contraction was greater than in the pelvis of Elizabeth Sherwood, if this be determined by the size of the largest circle that can be formed in the superior aperture, which seems to me to be the most proper mode of ascertaining their capacity. In the superior aperture of Sherwood's pelvis a circle may be formed equal to $1\frac{3}{4}$ inch; but we do not know that in any of the pelves, belonging to the poor women, who have undergone the Cesarean operation in Great Britain, a circle of the same size can be formed. We know that in the pelvis, of which I have just given a description, the largest circle, that can be formed in any part of the superior aperture, does not exceed one inch. It would therefore be by no means fair to infer, because Dr. Osborn asserts that he has delivered a woman by the crotchet, without destroying her, whose pelvis at the superior

rior aperture, would admit of the formation of a circle with a diameter of $1\frac{1}{4}$ inches, that he can deliver a woman, with safety, by the same instrument, whose pelvis, in the widest part of the superior aperture, will not permit the formation of a circle, the diameter of which is greater than one inch."

The author has collected with considerable industry a very full account of all the cases of Cesarean operation, and has reduced them into synoptical tables, with their fortunate or unsuccessful terminations.

"The first of these tables comprehends a short account of 110 cases of the performance of the Cesarean operation, and the third synoptical table, given in the 69th page of my Defence, &c. contains two, which, added together, make 112 successful cases. The second table contains 27 unsuccessful cases, which, with the 15 cases, contained in the first and second synoptical tables, given in my Defence, &c. p. 66 and 67, and the case, which has since occurred in the Lying-in Hospital at Manchester, make 43 cases, wherein the mother has died after the Cesarean section. Now, if we subtract the number of the unsuccessful from that of the successful cases, we shall find, that the latter exceed the former by 69."

For the Author's observations on the mode of performing the Cesarean operation, we must defer our account till a future Number of our Journal.

Some Observations on Vaccination, or the Inoculated Cow-Pox; by Richard Dunning, Surgeon, Plymouth Dock, and Member of the Medical Society of that Town and Plymouth, pp. 122. London, Cadell and Davies.

The ingenious Author is a strenuous advocate for the new inoculation, and appears to have taken considerable pains in investigating its nature and mode of action; and justly observes, that "we may inoculate the ladies with the utmost safety in the advanced stages of pregnancy; and from another of its distinguished traits—absence of contagion—nurses can be inoculated without danger of communicating disease to the infant, or. vice versa, the infant may be inoculated without injury, or subjecting the nurse to any indisposition or inconvenience whatever."

Critical Survey of the latest Theories on difficult Dentition in Children.

[Continued from pp. 77—82 of our last.]

We proceed now to give:

III. Dr. Wichmann's Theory, contained in his Ideas on Diagnostick, Vol. II. Hanover, 1797. pp. 1—81.

In passing over the medical writings and annals of all times, difficult dentition will be found to be almost unanimously acknowledged as a pathological phenomenon, and as the immediate cause

of

of many dangerous diſeaſes of children; and but few authors have hinted doubts againſt an opinion ſupported by the authority of its antiquity and by the force of prejudice. *Mercurialis*, who wrote about two hundred years ago, ſays in his work, *De puerorum morbis Francofurt*, 1584, p. 312, mentioning dentition: "Sed ſtatim nobis occurrit ſcrupulus non ſine animadverſione praelegendus, quomodo denſtio poſſit eſſe morbus; compertum enim eſt, naturam non intendere morbos neque favere, ſed dentitio eſt purum naturae opus, qua re non videtur morbus eſſe appellandus." However, he treats it as a diſeaſe, or, at leaſt, as pains concomitant with that operation of nature. In modern times alſo, ſome arguments have been ſuggeſted againſt the general prevailing opinion, by Cadogan, (on Nurſing, p. 31,) by Armſtrong (Diſeaſes of Children, p. 60,) to which his tranſlator, Dr. Schaffer, has added his own obſervations, tending to prove the inſufficiency of difficult dentition in producing ſome diſeaſes of the infantile age, that are commonly deduced from that cauſe. Notwithſtanding theſe doubts, Cadogan, Armſtrong, and Schaffer ſtill conſider it in too great a meaſure as the ſource of many infantile diſeaſes, not being able to prevail on themſelves totally to lay aſide that opinion, although they have found it in ſome reſpect inconſiſtent with their own obſervations and experience. Dr. Hecker, even though he denies thoſe dangerous ſymptoms to originate from the teeth cutting through, yet ſeems to regard dentition as a pathological phenomenon, aſcribing it to an irritation in the mouth, which neceſſarily muſt be cauſed by the teeth penetrating through.

During an extenſive practice of 30 years, Dr. Wichmann never could perſuade himſelf of the juſtneſs of the idea on difficult dentition; and confirmed by his experience in the doubts he had always entertained, he attempted at firſt to lay them before the public at large, however conſcious of the hazardous taſk of encountering a matter that has hitherto ſerved as an aſylum ignorantiae to many phyſicians, in explaining almoſt every morbific ſymptom by which infantile age is affected, and which ſo often proves fatal to it. The frequent mortality of children, occaſioned in the firſt years of life by convulſions, is moſtly attributed to the act of dentition, by which Hurlock (Practical Treatiſe upon Dentition, 1742) and other dentiſts, account for them. Berdmore too (on the Diſorders of Teeth and Gums, 1770, p. 192.) aſſerts, that more than half the children dying in the firſt two years of their life fall a ſacrifice to dentition; and in this the greateſt part of practitioners ſeem to have acquieſced, though none of them has ever given an exact account and explanation in what difficult dentition properly conſiſted, and the ſuppoſed morbid ſtate hence ariſing.

After theſe previous remarks, Dr. Wichmann proceeds to relate his opinion, which conſiſts in maintaining, that difficult dentition ought to be entirely exploded from the catalogue of diſeaſes, and that, as a pathological phenomenon, it exiſts but in the fancy of phyſicians. To ſupport, and to prove this aſſertion, Dr. W. enters upon a diſquiſition and examination of the different ſymptoms of difficult

ficult dentition, and ſhows how far they ſtand the teſt of criticiſm.—The ſymptoms ſuppoſed to attend difficult dentition may be divided into *topical* and *general*. Amongſt the topical ſigns have been enumerated,

1. *A ſwelling and hardneſs of the gums*, and this is looked upon as the ſureſt diagnoſis of difficult dentition, particularly when children are not yet able to expreſs the ſenſation of pain hence ariſing. But it is obvious to remark, that ſuch a ſwelling will be always found in the healthieſt children, who get their teeth in the eaſieſt way poſſible, when a tooth is preparing to cut through; and, beſides, if the ſwellings were in the leaſt of an inflammatory nature, it would certainly ſpread itſelf over the neighbouring parts; but it is limited and ſingle; elevations are only to be perceived, more or leſs, according to the number of teeth that are ready to break through. Inſtances of inflammation and of tenſion of the gums, and of a ſwelling of the cheek, which have been obſerved by ſome practitioners, at the time the dentes molares, or double teeth, are cutting, deſerve hardly to be brought forward as an argument for difficult dentition, and muſt rather be conſidered as anomalous caſes, deviating from the natural courſe of nature, which differ from dentition, commonly ſuppoſed to be difficult, as panaritium and pernio, and are only deſcribed as ſomething extraordinary.

Moreover, this ſuppoſitious inflammation of the gums ought to be particularly evident and ſtrong in the cutting of the eye-teeth, generally believed to be leſs eaſy, and, therefore, principally dreaded, if it were a ſignum pathognomonicum of difficult dentition; but on the contrary, at a cloſe inſpection, that ſuſpected red elevation will not even be found when thoſe teeth are almoſt hourly expected to get through at the end of the ſecond year, and even when ſome ſymptoms of illneſs or difficult dentition appear at the time they are cutting through. Redneſs of the gums is likewiſe a precarious ſymptom, as on the ſpot where a tooth is appearing, the gums are moſtly rather white than red.

2. *Pain of the gums* is counted amongſt the moſt important ſymptoms of difficult dentition, and though children are not always able to expreſs the ſenſation of it, and ſtill leſs to point at the place whence it ariſes, yet their exiſtence has not been in the leaſt doubted. However, children hardly complain of any pain on touching the gums; and even when they are of ſuch an age as to be able to expreſs themſelves, and to denote exactly the very ſpot where they feel the pain, particularly at the appearance of the eye-teeth, yet they never diſtinctly complain of pains at theſe ſuſpected places, though they are moſt cloſely examined, and moſt expreſſedly aſked for them. Beſides this, it ought to be preſumed that pains would be more perceptible in caſes where teeth break out in a preternatural way or direction; but this has not been found to take place when they grow one after another, forming a double row. Now, if in theſe caſes the jaw, the gums, the perioſtium, the nerves, or to whatever elſe difficult dentition has been attributed, ſuffer no affection at this time, at a ſtate ſo evidently violent and morbific, how can it be ſuppoſed

to be ſo, when the growth of the teeth is ſlowly proceeding in a natural way, and without any violence? We find, moreover, recorded by ſome writers, that children come into the world with teeth that had cut through before their birth, where nothing may be thought prepared for ſuch an action; and theſe children could have hardly lived if dentition was at all a violent and painful act.

Having pointed out how precarious and uncertain thoſe ſymptoms prove to be, it only remains to examine, whether the gums or the perioſtium are really capable of giving pain; or whether, as it is commonly aſſerted, thoſe parts are ſuſceptible of ſuch a tenſion as not to emit the teeth without a painful ſenſation. On this account practitioners never ought to be conſulted, becauſe they admit and maintain the preſence of ſuch a thing either without farther explanation, as Stoll ſays, "Dens exitum quaerens gingivam tendit;" or they derive the pain a compreſſione nervi, as Sauvage, well knowing that the gums ſuffer inciſion without cauſing pain. Some aſcribe it to a conſenſus muſculorum, as Girtanner, (on Dieaſes of Children, in German, p. 108.) to an irritation of the perioſtium. Under theſe circumſtances recourſe muſt be had to anatomy for determining ſatisfactorily the ſeat of pains, which are ſuppoſed to take place in dentition; however, we find almoſt all anatomiſts and phyſiologiſts agree, that the upper part of the gums is nearly deprived of ſenſation. J. Hunter, the firſt author on this ſubject, ſpeaks, in his Hiſtory of the Human Teeth, of the perforation of the gums, without in the leaſt mentioning a perioſtium; and, in explaining the pains attending dentition, he believes that there is an irritation which produces a diminution and abſorption of the gums, at a time when, according to others, a ſwelling of them is obſerved. Blumenbach (Hiſtory and Deſcription of the Bones, in German) ſays, that the teeth lie incloſed in a membrane, but he does not intimate that the upper part of them is alſo covered with it; and by the ſilence of other anatomiſts, as Prochaſka, (Annotationes Academicae) Albinus, Meyer, Loder, it may be juſtly ſuppoſed that it does not exiſt after the birth. However, Haller expreſſes himſelf very diſtinctly, "Alveolus in foetu ampriſſime patulus circa conformatum dentem connivet dum pars vitrea et abſque perioſtio eminet," (Element. Phyſiologiae, T. iv. p. 23.) Soemmering (on the Structure of the Human Body, in German, 1791, T. i. p. 207.) ſays, "While the roots of the teeth are growing longer, the teeth are protruded, and *bare of perioſtium*, they penetrate the gums."—A ſtill greater authority for this opinion is Alexander Monro, one of our firſt writers on oſteology, who rejects the exiſtence of a perioſtium with plain words; "without the gums the teeth are covered with no membrane," (Anatomy of the Bones, Edinb. 1748, p. 149).

After giving theſe proofs of the non-exiſtence of a perioſtium, it is needleſs to dwell any longer upon this ſubject; and it remains now to be conſidered, whether the gums are thus pierced and irritated by the teeth as to produce thoſe dangerous ſymptoms of difficult dentition. It has already been intimated, that the beſt and lateſt phyſiologiſts agree in denying almoſt all ſenſibility to the gingiva:

gingiva: but this is farther confirmed by the teſtimony of ſurgeons, who think the inciſion of the gums an operation attended with no pain, and conſequently the gingiva is nothing but a ſenſeleſs ſpungy ſubſtance, which eaſily yields to the preſſure and growth of the teeth. Hunter himſelf attributes but little ſenſibility to the gums, remarking, that before the teeth appear they ſerve in their place, which is likewiſe the caſe with old people. Another inconſiſtency is, that it is propoſed, by way of leſſening the danger of dentition, to make the inciſion, which is ſuppoſed to be attended with no pain, and yet a pain in the gums is taken to be the cauſe of dangerous ſymptoms! If then, thoſe diagnoſtic ſigns, ſo generally conſidered ſtrong and inconteſtable, are proved to be uncertain and illuſive, and if at the ſame time no pain can ariſe from the gums, the ſuppoſition of which has been employed as a cauſe of all the different ſymptoms of difficult dentition, it muſt be candidly allowed that this pathological explanation is deficient and uncertain.

3. *Salivation* is another ſymptom attending dentition, on which phyſicians rely ſo much, that at perceiving this in a child they do not require any other ſymptom, and hardly think it worth while to examine the mouth; but if they did, they would very frequently find ſalivation was occaſioned by aphthae or the thruſh, of which it is, as well as pains, a common ſymptom; and though they are not always met with, yet they are more frequently the cauſe of this ſalivation than has hitherto been thought; and in caſe they ſhould not be there, it is more natural to derive the ſalivation from a ſlight irritation of the ſalival glands than from dentition.

There is ſtill another ſymptom likewiſe apt to deceive, and that is, *when children often move their hands towards the face.* Of many inſtances, the following may prove the truth of its being fallacious. A child, two years old, had been ſickly about a fortnight from an unknown cauſe; it loſt appetite, ſleep, and became feveriſh; it ſhrieked ſometimes, and often brought its hands towards the face, when Dr. W. was ſent for. On undreſſing and examining the child, to diſcover the cauſe, an excoriation in the ear was found, which being removed the child got quite well again. In diſeaſes of children, therefore, nothing is more neceſſary than exact examination of the whole body, which will frequently, if not always, ſhow how ſmall a ſhare dentition has in producing them, and how eaſily one may be deceived in thinking that the pain ariſes from the place to which children appear to point. Of the numerous inſtances by which this may be demonſtrated, a very intereſting obſervation of Dr. Lodemann, of Hanover, deſerves to be mentioned. A boy, five months of age, became ſickly, cried often, without having any fever, and the cauſe was aſſigned to teething. Soon after convulſions, triſmus came on; he loſt the power of ſwallowing; nothing but external remedies could be applied, and he died after forty-eight hours. In diſſecting the body, the true cauſe was diſcovered to be a preſſure of the left teſticle in the abdominal annulus.

After having ſtated what can be ſaid of the topical ſigns of difficult dentition, Dr. W. proceeds to conſider the general ſymptoms and diſeaſes aſcribed to it. When all theſe diſeaſes are impartially examined, they will be found not to differ in the leaſt from other affections, daily obſervable in the firſt four months of life, where teeth are not yet ſuſpected, and after the ſecond year when moſt teeth have appeared. They ſeem, therefore, to admit a more natural explanation: By conſidering them as idiopathick (aphthae) and diarrhoeas, colics and vomition are much eaſier explained from a corrupted milk, and an inflammation of the eyes from a ſcrophulous diſpoſition. It ſeems, likewiſe, inexplicable how a kind of dyſentery can originate from dentition, as is aſſerted by medical authors, particularly when no pain in the mouth, and other topical ſymptoms are perceived, and when ſimilar evacuations occur in children of five or ſix years of age It is more probable that it ariſes from a topical cauſe, or any other leſs remote from the inteſtines. A ſtrangury and retention of urine are alſo ſuppoſed to be conſequences of dentition in female children; but they really are only owing to an excoriation and exulceration of the genitals, and eaſily yield to a topical treatment. A lethargic ſtate is more probably cauſed by a hydrocephalus internus than by dentition. The gonorrhoea, which is ſometimes obſerved at the time of dentition, is nothing elſe but an accumulation of matter, ſecerned by the glandulae tyſoni, and is a topical affection ſoon removed by injection under the prepuce. With reſpect to the fever incident at the period of teething, it may be obſerved, that many circumſtances can occaſion it, as children, even in that age, are ſubject to every febrile affection; and Ruſh has ſeen the yellow fever in a child of four months, without any neceſſity of aſſigning dentition as the cauſe of it; and it is ſcarcely pardonable to neglect other remedies with the idea of its being merely the conſequence of the irritation of the teeth; and beſides, it does not appear that it is removed when the teeth have cut through; and frequently, when the fever has been attributed to dentition, no teeth have appeared. There are alſo ſome febrile affections remarked as ſymptoms of a latent ſcrophulous diſpoſition, and theſe are frequently miſtaken for the teething fever.

Of all morbid affections by which children are afflicted, during the time they are cutting their teeth, none have been ſo generally, and without exception, attributed to dentition as convulſions; but when we conſider that moſt probably they are owing to cauſes more frequently occurring, to a momentary corruption of the milk from paſſions of the mind, to other diſeaſes of the nurſe, to the reſtoration of fluxus menſium, &c.; and when we farther conſider that all important diſeaſes generally begin with convulſions in the infantile age, it may be concluded how precarious the idea will prove in the practice. The following caſe may, moreover, prove the fallacy of this ſymptom:—A healthy boy, ſeven months old, was ſeized with convulſions and pains, which recurred in a ſhorter or longer ſpace of time. Gentle purgatives, clyſters, and bliſters behind the ear, removed

removed these affections, but after four weeks no elevation or penetration of a tooth was to be perceived.

Such are the symptoms, the pathology, and diagnosis of difficult dentition, of which it has been attempted here to point out the deficiency and fallacy. In surveying the method of cure delivered by medical writers, we meet with the same inconsistency, and the grossest empirical uncertainty. Hurlock has collected all superstitious remedies that were in use in his time, and has besides enriched it with the hare's-brain, which was employed to soften the gums or to promote the growth of the teeth. Hard and soft things were indiscriminately given to children to bite; and, in short, remedies were employed which only superstition could have invented, and ignorance and indolence kept up. But of all remedies, none has been so generally received and supported by the authority of practitioners as the incision of the gums, of which Ambrosius Paré, an eminent French surgeon, of the sixteenth century, seems to have been the inventor. The use of this operation was afterwards much confirmed by Hurlock, though rather too far extended by him, as he applied it at the age of three years; and once even when the child was but ten days old. Berdmore, a known dentist of his time, and other eminent practitioners, have adopted it. Underwood (Diseases of Children, 1784, p. 95) recommends it very much as being attended with no pain, though pain and inflammation are said to take place at this very spot; and, besides this, he derives it from the periosteum or membrana nervea, covering the teeth immediately under the gums; but it has been sufficiently shown that no such thing exists.

[To be concluded in our next.]

Elemens de Myologie et de Syndesmologie, par Thomas Lauth, 1 vol. à Bâle, chés Decker, à Paris; chés Koenig, et à Strasbourg. VI. année de la Republique. 1798. pp. 204.

Amongst the number of anatomical compendiums that have been published in different countries, the present deserves to be recommended on account of its accuracy, conciseness, and the order which the author follows, as well on account of containing a complete literature, and references to the best figures. The whole is divided into several lectures, of which this volume contains but eight, besides an introduction, in which some general remarks on the structure, action, distribution, and denomination of the muscles, on the folliculi mucosi, and the ligaments, on the literature of this branch of anatomy, are previously explained. The redness of muscles, which the author considers as essential to them, merely depends upon the red part of the blood contained in their vessels, and easily disappears by putting them in water for some time, and besides the muscles of animals, without red blood, (animalia ex sanguia,) as insects, are white; that therefore the red colour cannot be considered as an essential property of muscular structure. The word *musculus* he thinks rather to be derived from μυειν (contrahere) than

than from μυς, as it is generally supposed. In describing the muscles, he proceeds almost according to *Albinus's* method, though it seems a little inconvenient, that the description of those muscles which extend to different parts, is separated in such a way, that, for instance, the greatest part of the latissimus dorsi is described with the muscles of the back, but its smaller portion, and tendon with those of the arm. It is, however, very useful to the beginner, that the author has prefixed to the description, the best mode of preparing each part anatomically in the following order:—*preparation, synonimous terms, structure and insertion, and use.* In mentioning *Vesalius's* work, he supports an opinion of *Albinus*, that the plates to it were not done by *Titian*, but by *Jean Etrenne*, because he thinks it not likely that *Titian* should have attended to anatomy at the advanced age of 62, when young *Vesalius* was publishing his work; being, besides, very much occupied with pictures, that were ordered to be made by him; and it is moreover observed, that great painters are seldom able to draw objects of natural history and anatomy with accuracy, which can only be acquired by continual practice.

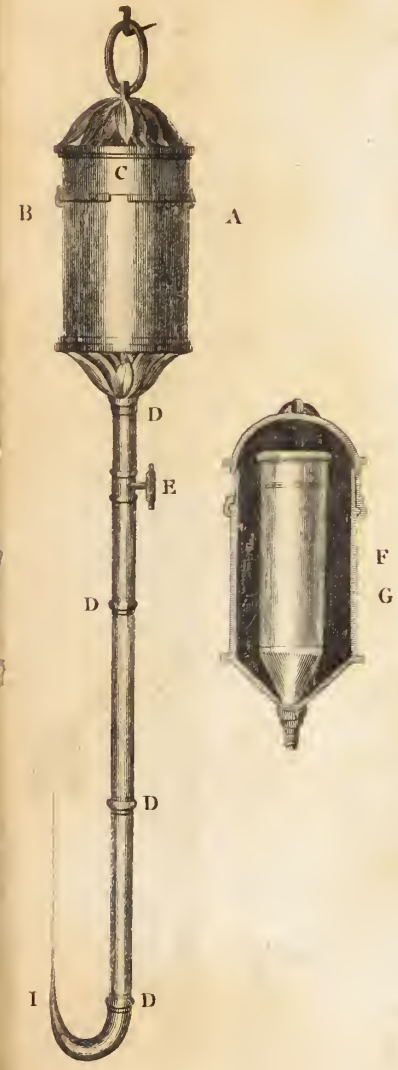
Chemisches Handwoerterbuch, &c. i. e. *Manual Lexicon of Chemistry, composed after the latest Discoveries, by* Dr. Dav. Lewis Bourguet, Professor of Chemistry, at Berlin. *With a Preface of* Dr. Sigm. Frederick Hermbstaedt. Vol. 1. A—E. 1798. Vol. 2. F—K. 1799. Berlin for Bemigke. Pr. 4 rixdollars, or about 16s.

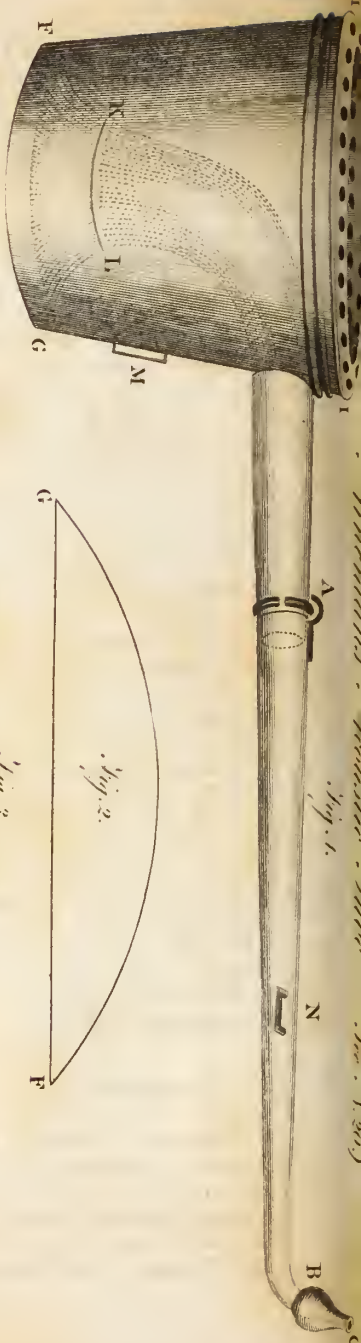
Although we possess in the Chemical Dictionary of Macquer, a work which is full of the best chemical information, and for the time in which it was written, extremely well performed, and calculated to give a complete and general survey of chemistry, yet the astonishing progress which that science and art has made of late, and which is almost daily increasing, seems to have rendered it necessary to compose a new work of the kind, whose chief object of utility and accuracy, would of course consist in having collected all discoveries and facts in chemistry that are known to the present times. Mr. *Bourguet* has therefore a claim to the praise of the public for having undertaken this task, of which, as far as we are able to judge, he has hitherto sufficiently acquitted himself. However, it would not have been amiss, if in some respects he had attempted to be more concise, which we think is a necessary requisite for a work, whose object is to convey information in an easy way. More care ought also to have been taken in the correction of the press.

Description

M.r Humboldt's
Anthracometer

See Page 179.





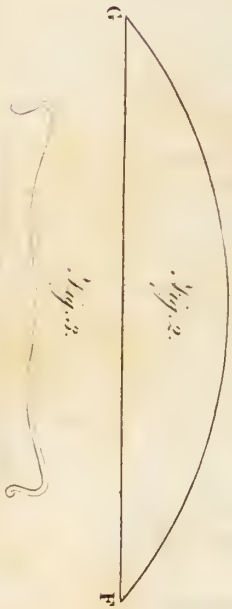


Fig. 1.

Fig. 2.

Fig. 3.

Published Oct.r 1.st 1800, by R. Phillips 71 St Pauls Church Yard.

Description of Mr. HUMBOLDT's *Anthracometer, or an Instrument for measuring the Quantity of Carbonic Acid contained in the Air.*

[With an Engraving.]

THIS instrument consists of a very strong glass tube, from 3 to 4 lines wide, and about 12 inches long; and ends in a globe of 1.2 or 1.3 inch in diameter. The lower three inches of the tube are bent in such a way, that the distance of the globe from the cylinder is no more than 6.3 inches, for the sake of putting it into a narrow glass of water. The tube *a b* must be of equal width, but it is indifferent whether it be wider in *c* or *d*; however, it is better when the capacity of the whole cylinder does not exceed 2 or 2.5 cubic inches In *e* it is divided in two sections, of which the upper one must remain 7 inches long; both parts are joined by a metallic cylinder, so that they may be unscrewed; but no water must get through. The upper end of the glass tube is cemented into a metallic cylinder, 6 inches, high *f*, which has, on its outside, nine small worms of a screw. Its mouth is conically turned out, and into this a muscle-shell-like valve is put, of the thickness of one or two lines. Another metallic cylinder, *h*, 5 lines high, shut by a plate above, *k l*, and excavated as the box of a screw, exactly fits the tube as a cover. To increase the pressure, the plate *k l* has a hole in the middle, and another screw presses the valve to the mouth of the tube.

The use of this instrument is very simple. Fill it with *liquid caustic ammonia*; pour out of the tube, *a e*, as much as you are going to examine of the air, and mark with a pair of compasses the length of the column of air on a scale; then shut the valve, and let the air go into the globe; and the carbonic acid contained therein, will, on account of the greater surface it finds, combine itself entirely with the caustic ammonia. The latter will begin to sink in the tube; and when this process is over, open the valve and fill the whole tube with it. Let the air from the globe pass into the tube again, which is then unscrewed at *e*, under water; and the upper piece must likewise be immersed till the water is equally high at the inside and the outside. The remaining part of the air, substracted from the above quantity, shews the proportion of carbonic acid. Instead of the ammonia, kali may, perhaps, be preferable, as it is more easily prepared. The instrument may likewise be used for measuring oxygen gas.

Remarks on the Application of cold Water in Amaurosis and Weakness of Sight; by Dr. BEER, *Oculist at Vienna. (Extracted from* Arnemann's Magazine for Surgery, *Vol. II. No. I.)*

Cold water is undoubtedly one of the most powerful and surest remedies against the weakness and inactivity of the vessels and optic nerves, which generally remain after a strong congestion of the blood towards the head and eyes. It is therefore employed with the greatest success in that species of amaurosis, caused by a congestion

geſtion of blood to the head, after ſufficient quantities of blood have been taken away by a general and topical venæſection, to remove the ſubſequent diſtention and weakneſs of the veſſels. How uſeful the external application of cold water often proves to be in amauroſes, originating from a general debility of the body, or a topical weakneſs of the eyes, is known to every practitioner.

Perſons who have ſuffered vehement inflammations of the eyes frequently retain a dim and weak ſight, though no viſible fault can be diſcovered in the eyes themſelves. They ſometimes are entirely cured in a few days, by the external uſe of cold water. It likewiſe happens after the extraction of the cataract, that the operated perſons complain of black ſerpentine lines, marks, and duſt, floating before the eyes, and hindering the ſight; which ſymptoms always yield to the uſe of cold water.

The application, however, of this excellent and ſimple remedy requires ſome caution. As long as any ſymptom of congeſtion is perceived, it ſhould be carefully avoided. The patients, indeed, will feel a momentary relief and amendment in the ſight ſoon after the application, but a great tenſion in the eye-ball, a decreaſe or entire loſs of ſight, and ſometimes vehement ophthalmies follow the inconſiderate uſe of cold water. When, on the contrary, the face of the patient is pale, and the white of the eye not red or yellowiſh red, but when only a few turgeſcent blood veſſels are remarked on it, when motion cauſes no head-ach, nor increaſes the dimneſs, when ſparks or other ſhining corpuſcles appear no more before the eyes, and the patient perceives no tenſion, or any other particular ſenſation in moving the eyes, cold water may be uſed with ſafety and advantage.

In applying it, a gradual proceeding is to be obſerved. At firſt, head and eyes ſhould be covered with a cloth dipped in cool water, which muſt be frequently repeated. Some days after they may be bathed with colder water. After having performed this for eight or ten days, it may be applied in a more powerful way by means of a ſyringe, with which the water is brought to the eye-lids, eye-brows, temples, and, if the patient can bear it, to the eyes themſelves.

The uſual mode of applying the water in theſe caſes by means of ſmall cups of glaſs, or earthern ware, can never have any effect, by the way of coldneſs, becauſe the water gets too ſoon, in this way, a conſiderable degree of warmth; but the other application has the double effect of bringing the water ſufficiently cold to the part, and by cauſing an efficacious commotion in the eye itſelf.

To apply the water in this manner with greater eaſe and more advantage than by a ſyringe, a very convenient inſtrument has been invented by Dr. *Beer*, which is very well adapted to the purpoſe. (ſee the plate.) The whole is made of copper or tin, and conſiſts of a box, in which is incloſed a ſmaller veſſel, made of pewter, *F*, which contains about five or ſix pounds of water. The ſpace *G*, between the two veſſels, is filled with broken pieces of ice, and the degree of cold may be increaſed according to circumſtances,

by

by adding ſalt or ſal ammoniacum to it. The tube is divided into four parts, which are well joined by ſcrews, *D*, by which means they can be conveniently put into the box, when the inſtrument is not wanted. By turning the cock, *E*, the water may be ſtopped, or by opening it more or leſs, the force of the fall of the water be increaſed or diminiſhed, as it ſeems proper. (For this purpoſe, it would be very convenient, if the ſpout of the tube *I*, could be unſcrewed, ſo that different ſpouts with larger or ſmaller openings might be put on, as the former would tend to leſſen the force of the water, and the latter to increaſe it. Another ſpout, made like the roſe of a watering-pot, and perforated with many holes, would be well calculated to give a greater ſurface for the water to act upon.)

The whole inſtrument is about five feet long, and may be ſuſpended in ſome convenient place of any apartment; but it ſhould be high enough that the patient need not, in uſing it, bend the head too much down. The lid, *C*, is faſtened on the veſſel in *B A*, as appears from the plate.

In obſtinate caſes of Amauroſis, where cold water is preſcribed, it may be uſed as a dropping bath, by ſcrewing the ſpout, *H*, to the tube, inſtead of the curved end. The cock may be turned in ſuch a way as only to emit the water by drops, which fall either on the eye-brows or temples; and the effect of this powerful remedy can be leſſened or ſtrengthened, according to the height from which it is applied. The commotion and pain, cauſed by this mode of application, is generally ſo vehement, that many patients will not bear it. However, its efficacy is very great, and caſes, where it proves without avail, muſt be conſidered as doubtful and moſtly incurable, and very rarely yield to other exciting remedies, as electricity, &c.

The uſe of this convenient inſtrument might be made more general and common in bathing and ſtrengthening the eyes, and would do a great deal of ſervice, particularly to thoſe whoſe ſight is weakened by reading, lucubration, or by any other means. To theſe it would prove a very uſeful and commendable piece of furniture, and for that purpoſe the above mentioned alterations in the ſpout would, perhaps, be requiſite; the ſmaller veſſel, *F*, might then be taken out, as the degree of cold need not be ſo great for common purpoſes.

PHARMACEUTICAL PROCESS.

To obtain acid of tartar in a very pure ſtate, Mr. *Buckholz*, of Erfurt, uſes the following method, founded upon experiments.

Take of finely pulveriſed cryſtals of tartar 6lb. and after boiling them in a proportionate quantity of ſpring water, add by degrees, continually ſtirring the mixture, pure, finely pulveriſed, and well waſhed chalk, till no effervеſcence be perceived, and till it have

no effect on blue paper. Twenty-ſix ounces of chalk will be required on an average for 6 lb. of cryſtal of tartar. Pour off cautiouſly the ſalt ſolution, which contains tartarus tartariſatus, and waſh the remaining tartareous ſelenites till it become quite free from ſalt and other heterogenous particles. Mix 1lb. of theſe ſelenites with 6 oz. 7 dr. and 50 gr. of white pure ſulphuric acid, 1,840 ſpecific weight, which has been diluted before with 6 or 8 times its weight of pure water. Let the mixture now be digeſted for three days, frequently ſhaking it. After this, let the tartareous acid be ſtrained through a clean bag, and free it from ſelenites by expreſſion and waſhing with cold water. Let all the liquors evaporate by a gentle fire. After being cool, the acid is to be diſſolved in a little water, and the ſolution filtered, by which means a conſiderable quantity of ſelenites is ſeparated, which is waſhed till it becomes inſipid. The filtered liquors are then altogether evaporated to the conſiſtence of a thin ſyrup, whereby again a ſmall portion of ſelenites ſeparates, which muſt be purified from the acid by filtering and expreſſion. All the acid liquor is now expoſed in a moderate warm place to a ſlow and quiet evaporation. By this mode Mr. *B.* obtained the fineſt white cryſtals. The liquor remaining over them muſt be poured off, and the cryſtals put upon paper, in which there is no glue, till they become dry. This laſt liquor, which is a little yellowiſh, is either gently evaporated, dry tartareous acid is got, or ſome nitric acid is added to it, till it be diſcoloured.

From the above quantity Mr. *B.* obtained 35—36 ounces of tartareous acid, 2 or 3 ounces included, which were abſorbed by the paper. The acid prepared in this way was quite free from ſulphuric acid. (*Hromſdorf's Journal of Pharmacy, No. I. in German.*)

MEDICAL

MEDICAL AND PHYSICAL INTELLIGENCE.

Prof. WURZER, of Bonn, relates a caſe of venereal diſeaſe, where nitric acid was employed with the greateſt ſucceſs. A young man being apparently cured of local venereal affections, had ſoon after venereal ulcerations in the mouth, and at the ſame time, an exanthematous eruption breaking out over the body, particularly in the face. After having undergone ſix ſalivations, the chancres healed, but the eruption, which covered the whole body, continued to increaſe, and began to ulcerate at different parts of the body. His conſtitution was ſo extremely debilitated, that Prof. W. to whom he applied for advice, was obliged to ſtrengthen him by a proper diet and regimen and corroborant remedies, combined with ſuch as are recommended in ſimilar caſes, as guaiacum, ſarſaparilla, &c. Although his ſtrength was ſomewhat re-eſtabliſhed, yet no change was brought on in the eruptions and ulcerations, and Prof W. began now to give him thoſe mercurials which are leſs apt to produce ſalivation; as, ſublimate and mercurius cinerus, or ſolubilis Hahnemann; but after taking only one or two doſes, a vehement ſalivation came on, which again weakened him ſo much, that he was obliged to leave off taking mercurials, particularly as the ſymptoms increaſed, and moſt excruciating pains of the bones (dolores oſteocopi) were now produced, of which he felt little before.—Under theſe circumſtances, Prof. W. had recourſe to Nitric Acid, of which he gave him one drachm diluted with two pounds of water, to be taken in twenty-four hours, with a decoction of ſarſaparilla. Having continued this for ſome time, the eruptions and ulcerations began to dry, the pains in the bones ceaſed by degrees, and in the ſpace of three weeks the patient was quite recovered; by ſtrengthening medicines and cold baths his health was entirely re-eſtabliſhed. Prof. Huſeland, in whoſe Practical Journal, Vol. iv. No. 19, this caſe is related, remarks, that nitric acid, according to his experience, ſometimes proved of great benefit in affections which are rather conſequences and morbid remainders of venereal diſeaſe, and not any longer depending on the poiſon; but that he never ſaw it of any uſe in a true venereal complaint, while the poiſon was ſtill active.

Dr. HARGENS, of Kiel, has made ſome obſervations, which ſeem to confirm the great uſe of alkali in convulſive affections — A child, three years of age, was vehemently afflicted with convulſive fits, particularly in the left ſide; againſt which, flores zinci, muſk, extractum hyoſciami, clyſters of aſſafœtida, anodyne inunctions with opium, and bliſters, were all applied in vain. The oleum tartari per deliquium, or aqua kali preparati, was now given

to twenty-five drops every five minutes. Immediately after the first dose, the convulsions diminished; and after the second, their violence had entirely ceased. —— Another child, nine months old which suffered dreadful convulsions, took fifteen drops every five minutes, and was almost instantly relieved by it. It proved likewise of very great service in other spasmodic affections; and, at least, as a palliative remedy in cardialgic paroxysms, particularly those of the hysteric kind, and in chlorotic constitutions. *(Hufeland's Practical Journal, Vol. viii. No. 1.)*

Dr. GEBEL relates an instance of the great use of the extractum aconiti in a vehement rheumatic cardialgy, given in a dose of two grains every morning and evening, after which it ceased immediately, though large doses of opium had been applied before without any effect. This remedy, which seems to be neglected in this country, has still kept its reputation amongst the physicians of Germany, principally in obstinate rheumatic complaints. *(Ibid.)*

In the same Number of that Journal, we find the use of Mercurius sublimatus corrosivus, very much recommended in obstinate amaurosis, and confirmed by two cases. The first was a patient much affected with rheumatism, of which he was relieved by guaicum, aconitum, sulphur, antimonials, &c.; but the amaurosis suffered no change by these remedies, and rather got worse. After having tried oleum cajeput, valerian, electricity, &c. without effect, the patient was ordered to take the corrosive mercury in the following way:—℞. *Mercurii sublimat. corrosiv. gr. ij. solve in aether vitriol.* ʒij. of which to take 10 drops every morning and evening in half a cup of warm milk. When he had used about 12 grains of mercury, the sight was so far re-established, that he was able to read and write. Though he was perfectly well, it was thought proper to continue the mercury for some time; but as the sight seemed to decrease by this continuation, it was left off. It is remarked by farther experience, that probably as soon as a certain dose has had its effects, farther benefit is not to be expected from the continuation of this remedy, but rather the contrary. Another patient, quite blind of both eyes, used it for six weeks, in which time he entirely recovered the sight of the left eye, though no change was produced in the right; but it was not thought proper to continue the remedy on the above account. It is, however, proper to observe, that this powerful remedy should be used with caution: it seems particularly indicated, when any suspicion of a venereal cause exists, or in rheumatic amauroses, as it has been lately recommended in such complaints. *(Ibid.)*

In the same Journal the following fact is mentioned, which deserves the attention of our readers.—An anatomical preparation of indurated glands from a very scrophulous subject being put into spiritus vini, was found some time after to be incrusted with saline crystals. To prove that they really came from the preparation, and were

were not contained in the ſpirit, it was laid into other ſpiritus vini wherein likewiſe cryſtals appeared upon it, but none upon another preparation, which was put into the former ſpirit. By a chemical analyſis, thoſe cryſtals were found to conſiſt of ſaccharic acid. This inſtance ſhews what changes are produced in the chemical mixture of the humours of the body by the morbid affections of it, and ſeems to prove, that a particular corruption of the lymph, of an acid nature, takes place in the ſcrophula, which, though originating from a vitiated action of the lymphatic ſyſtem, muſt be conſidered as the prime cauſe of many otherwiſe inexplicable ſymptoms of that diſeaſe, and which ſeems, at the ſame time, to explain the uſe of abſorbent and alkaline remedies here. *(Ibid. vol.* vii. *No.* 1.)

Citizens Buniva and Vauquelin have, in the analyſis of the liquor amnii of a cow, diſcovered that it contains a peculiar acid, which they call *acide amniotique*. We ſhall, perhaps, communicate to our readers, the paper on this ſubject, which is printed in the *Annales de Chemie, Ventôſe, An. viii.*

We have already mentioned in one of the Numbers of this Journal, that the late Mr. Girtanner, of *Gottingen*, meant to have diſcovered the analyſis of the azote. In a letter to Cit. *Van Mons*, he gives a ſhort account of it. Azote is now, according to him, a compound ſubſtance conſiſting of hydrogen and oxygen in the proportion of 0,21 of the former, and 0,79 of the latter; and conſequently, nothing but an oxyde of hydrogen. Our eudiometrical operations are erroneous with reſpect to the azote, becauſe this is but a production, and did not exiſt in the air before the experiments were made. Alum and aluminous earth are the ſubſtances which moſt eaſily change atmoſpheric air into azote. It is produced by reſpiration, the oxygen, of which a part is always condenſated in the lungs, combining itſelf with the hydrogen, and changing it into azote; which however, more viſibly takes place by bringing hydrogen in contact with wet aluminous earth. We have to expect a treatiſe upon the ſubject. *(Ibid.)*

Mr. Eckeberg gives a more accurate account of a blackiſh ſtone found at Ytterby in Sweden, and of the new earth contained therein, called Ytterearth. This foſſil was firſt analyſed by Mr. Gadolin, but he does not mention the feld ſpar which Mr. Eckeberg found mixed in it. From 100 parts of the foſſil he obtained 47 ½ parts of that new earth. It is ſoluble in all acids, to which it imparts a ſweetiſh taſte; cauſtic alkalis have no effect upon it. It forms with ſulphuric acid an eaſily ſoluble ſalt, which ſoon ſhoots into cryſtals, and keeps its acid entire. *(Swediſh Tranſactions, Vol. xviii.* 1797.)

Prof. Parrot, of Riga, has made ſeveral experiments, by which he attempts to ſhow, that coal is a compound ſubſtance, that

that carbonic acid is only contained accidentally in it, as in chalk and lime; that the true carbon differs from it, and is either nothing but hydrogen, or a combination of hydrogen and azote, and consequently that there exists no proper hydrogen, but only carbon, and that water is now composed of carbon and oxygen. *(Voigt's Magazin for Natural Science, Vol. ii. No. 1, p. 131.)*

Dr. SEYBERT, of Philadelphia, writes in a letter to Prof. Blumenbach of Gottingen, that the Philosophical Society of Philadelphia has now obtained a large collection of bones from the western country, of that prodigious unknown animal, called *Mammut Ohioticum*, which will throw a new light upon its osteology and form. It is remarkable, that some bones of the posterior extremities have a great likeness to human bones, as the patella, tibia, the tali calcaneus, and the os cubiforme. *(Ibid.)*

Prof. LINCK, of Bostock, relates in a letter to the same Professor, a rare instance of a mule having become pregnant in the province of Algarbia, in Portugal, where it was shown for money as a great curiosity, first pregnant, afterwards with the young one. Instances of mules propagating their own species are extremely rare; however, they can be used as a strong argument against a notion adopted by Ray and Buffon, that those animals which are capable of producing with one another young ones, and are possessed of fecundity, belong to one and the same species; because, if this was a general rule, the horse and ass ought, according to those rare instances, to be considered as of the same species, however different they are in their external and internal structure. *(Ibid.)*

Dr. MEYER, of Berlin, relates an experiment, by which he was convinced that iron particles entered into the blood with the chyle. He gave at first to a dog five grains of limatura martis per day, and afterwards the same portion in the morning and evening. Having continued this for eight days, the dog was killed, an hour and a half after he had taken the last dose. A ligature being applied to the ductus thoracicus, Dr. M. obtained from it about one drachm of chyle, in which not the least iron particle could be traced, either by any reagency or by combustion. All the fluid found in the stomach and intestines, shewed that it contained iron, by a black precipitation, when mixed with a solution of volatile liver of sulphur. To be still more sure of the non-existence of iron in the chyle, in case it should be present in such minute portion as not to be affected by reagency, he mixed a small quantity of a very diluted solution of vitriolum martis with the chyle, and tried it with the volatile liver of sulphur, when a black precipitation was immediately produced. *Reil's Archives for Physiology, Vol. iv. No. 3.*

Dr.

Dr. SCHMIDT, of Osnabruck, who has related that curious instance of abstinence from food and drink, which we communicated to our readers in the last Number of this Journal, acquaints the public, that the whole case is discovered to be a most subtle imposition, whose proceeding and discovery he is going to publish in a pamphlet; and we shall not omit to give an account of it here, as a circumstance very interesting with respect to Pschology, and also as an instance how cautious physicians always ought to be in similar cases, and how little the most appearing circumstances are to be trusted.

Mr. PASUMOT, mentions in his Voyages Physiques dans les Pyrénées, 1788 and 1789, Paris, 1797, that on his journey to Gavarin, he has heard of a family being extinguished at Visos, about seventeen years ago, whose members were all eight feet high, and amongst them a man reached the age of 110 years.

Dr. WOLCOT, (the admired satirist, Peter Pindar) has it in contemplation to publish a Treatise on the general Causes of Deafness, with the modes of cure. Such a publication is certainly a *desideratum*, as no minute and satisfactory account of the complaints of the Ear has hitherto made its appearance.

Many unfounded reports having been circulated, which have a tendency to prejudice the mind of the Public against the Inoculation of the Cow-Pox; we, the undersigned Physicians and Surgeons, think it our duty to declare our opinion, that those persons who have had the Cow-Pox, are perfectly secure from the infection of the Small Pox, provided such infection does not exist in the system at the time of the inoculation for the Cow-Pox.

We also declare, that the inoculated Cow-Pox is a much milder and safer disease than the inoculated Small-Pox.

William Saunders, M. D.
Matthew Baillie, M. D.
Henry Vaughan, M. D.
Maxwell Garthshore, M. D.
John Coakley Lettsom, M. D.
James Sims, M. D.
John Sims, M. D.
William Lister, M. D.
Robert Willan, M. D.
C. Stanger, M. D.
Alexander Crichton, M. D.
Thomas Bradley, M. D.
Thomas Denman, M. D.
John Squire, M. D.
Richard Croft, M. D.
Robert Batty, M. D.
R. J. Thornton, M. D.
Richard Dennison, M. D.
Henry Cline.
Edward Ford.
Astley Cooper.
John Abernethy.
Joseph Hurlock.
William Blair.
Samuel Chilver.
J. M. Good.
James Horsford.
Francis Knight.
James Leighton.
James Moore.
Thomas Paytherus.
Thomas Pole.
J. W. Phipps.
John Ring.
James Simpson,
H. L. Thomas.
Jonathan Wathen.
Thomas Whateley.

NEW

NEW MEDICAL PUBLICATIONS IN JULY.

Obſervations on the Cow-pox, by William Woodville, M. D. Phyſician to the Small-pox and Inoculation Hoſpitals. Phillips.

Reflections on the Cow-pox, illuſtrated by Caſes to prove it an abſolute Security againſt the Small-pox; in a Letter to Dr. Jenner from William Fermor, Eſq. Robſon.

Noſology; or, a Syſtematic Arrangement of Diſeaſes, by Claſſes, Orders, Genera, and Species, with the diſtinguiſhing Characters of each, and Outlines of the Syſtem of Sauvages, Linnæus, Vogel, Sagar, and Macbride; tranſlated from the Latin of William Cullen, M. D. 6s. bds. Kay.

Reſearches, Chemical and Philoſophical, chiefly concerning Nitrous Oxyde, or dephlogiſticated Nitrous Air, and its Reſpiration; by Humphrey Davy, Superintendant of the Medical Pneumatic Inſtitution, 8vo. 10s. 6d. boards. Johnſon.

The Doctrine of Phlogiſton eſtabliſhed, and that of the Compoſition of Water refuted; by Joſeph Prieſtley, LL. D. 2s. 6d. Johnſon.

NEW MEDICAL PUBLICATIONS IN GERMANY.

Syſtem der Chirurgie, i. e. Syſtem of Surgery; by J. ARNEMAN, Profeſſor at Gottingen, Vol. I. with plates. Gottingen, 1799, 8vo. pp. 350. Vandenhock and Ruprecht.

Verſuch einer Pragmatiſchen Jeſchichte, i. e. Eſſay of a Pragmatical Hiſtory of Medicine; by KURT SPRENGEL; fourth Volume, 1799, pp. 564, 8vo. price two rix-doll. or about 7s. Halle, for Gebauen.

Bertrage zur Medicinischen Klinik; i. e. Contributions to Clinnick Medicine, collected on his Travels through Germany, Swiſſerland, and France, by Dr. ERNEST HORN, of Brunſwick, Vol. I. 1800, pp. 600, 8vo. price one rix-doll. twenty gr. or about 6s. Brunſwick, for Reichard.

Elementarlehre der Organiſchen Natur; i. e. Elementary Syſtem of Organic Nature; by Dr. FRANCIS JOSEPH SCHELVER, firſt Volume, Organomie, 1800, pp 103, 8vo. price twelve gr. or about 2s. Gottingen, for Dieterich.

To CORRESPONDENTS.

We again requeſt our Correſpondents to be particular in their manner of writing proper names of perſons and places, as ſeveral inaccuracies have ariſen from a want of diſtinctneſs in the character.

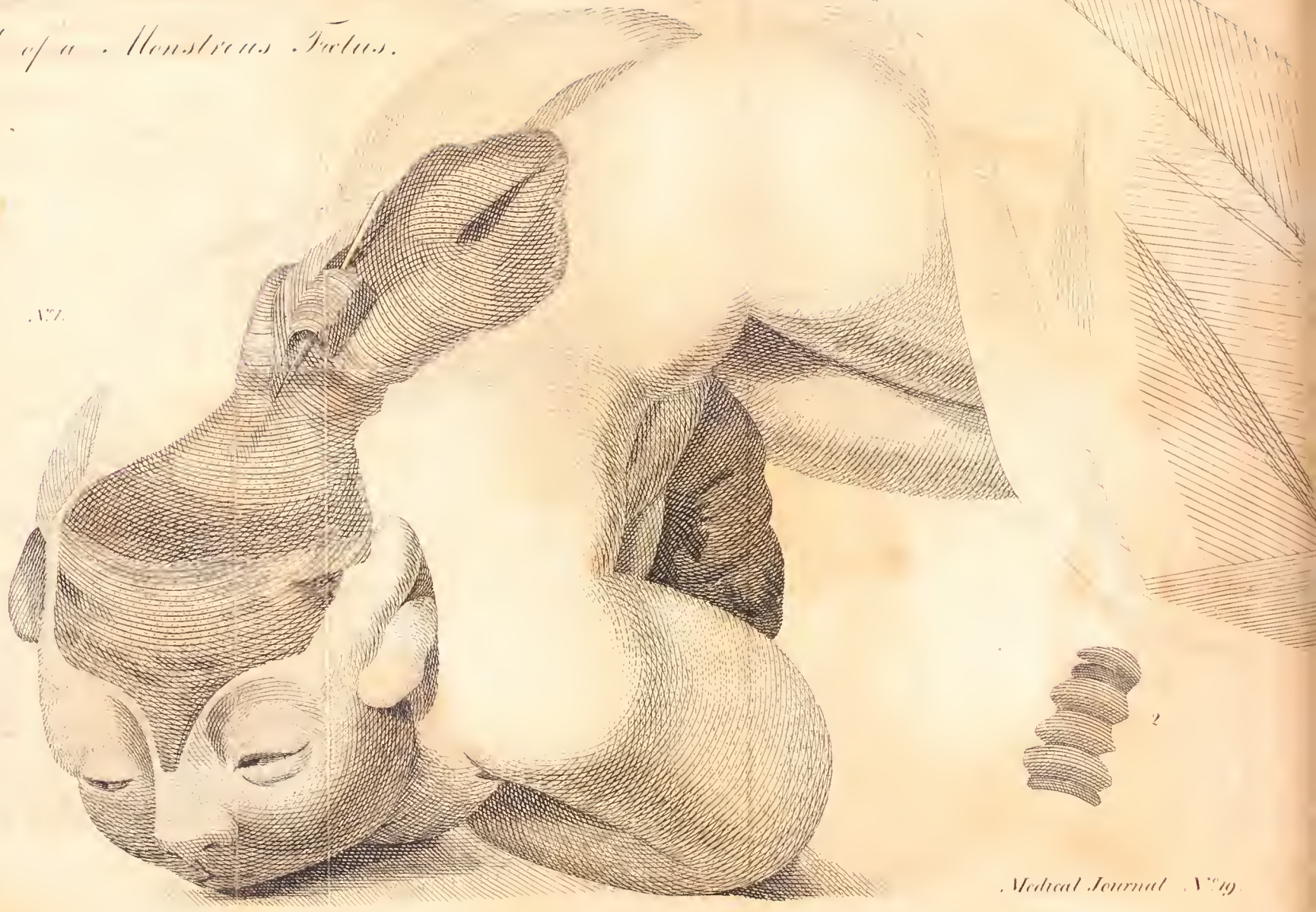
Communications have been received from Dr. Cappe, Dr. Gillespie, Dr. Sugrue, and Mr. Guthrie.

ERRATA.

No. XVII. Page 6, line 10 from the bottom, dele *to be*, and read "*where the pupil is quickly dilated.*"

Page 7, line 2, for *irritability*, read *immobility*.

Sketch of a Monstrous Fœtus.



N°7.

2

Medical Journal N°19

THE

Medical and Phyſical Journal.

VOL. IV.] SEPTEMBER, 1800. [NO. XIX.

A Case of Mal-formation, with an Engraving.

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

THAT peculiarity in the fœtus, which conſiſts in its deprivation of brain, is not very uncommon; I met with an inſtance of it eight years ago, and have ſeen others in different anatomical collections. The deficiency in the ſubject I am about to deſcribe, is extended to the medulla ſpinalis; and as it is new to me, and has given riſe to ſome reflections, which may not be altogether uſeleſs, I have taken the liberty to tranſmit them for inſertion in your Journal.

The mother was delivered at Bolton, by Mr. Barlow, to whom I am indebted for the hiſtory of the caſe, and for the fœtus itſelf. The only material circumſtance in the former, was, the woman's poſitive aſſertion that ſhe went two months over her time, which, however, I am inclined to doubt, and would rather ſuppoſe, that ſhe had committed an error in her reckoning. In the caſes moſt analogous, the birth has been uſually premature, generally at the ſeventh month, and it happened ſo in my former caſe.

In this child, the upper part of the cranium is entirely wanting; and there remains only a thin plate of bone, covered with a doubling of membrane, in place of the cervical and the greater part of the dorſal vertebræ. This fold contained no medulla, though it exhibited, on being ſlit open, ſome ſlender fibrils, which might be conſtrued into nerves; I ſhould compare it to the proper coverings of the medulla ſpinalis, of a thinner texture. Lower down, a diſplaced portion of vertebræ is ſhewn, which was hollow, but contained no medulla; the reſt of the ſpine conſiſted of a ſolid column of bone, without any ſpinous proceſſes. The child had, beſides, a ſlight inverſion of the feet, and a hare-lip on the right ſide; in other reſpects, it was full grown, and the colour of the ſkin was natural.

There did not appear to be any deviation from the common ſtructure and arrangement in the viſcera of the thorax and abdomen: the heart, lungs, and thymus, occupying the former cavity, in their proper order; and the ſtomach, liver, ſpleen, kidnies, great and ſmall inteſtines, &c. the latter. The larger inteſtines were alſo diſtended with meconium.

In the cheſt too, I traced the phrenic nerves, deſcending to the diaphragm in their uſual courſe; and in the neck, the par vagum, with its ganglia and intercoſtal, lying between the carotid artery and internal jugular vein. Though the eyes were outwardly well formed, I could not find by diſſection any optic nerve.

The nerves in the upper and lower extremities were, nevertheleſs, perfect; for I traced them in the arm and in the thigh, and in neither did I obſerve any difference in their number, ſize, colour, or diſtribution.

This fœtus was ſtill born, which, if I miſtake not, has always been the caſe when the brain has been wanting. However, the mother was not ſenſible, during pregnancy, of any difference from what ſhe had been formerly accuſtomed to, either in her own feelings or in the motion of the child; and ſhe had had many children. The birth was marked by no particular occurrence; it would probably be facilitated by the reduced bulk of the head.

In comparing the defective ſtructure of this child with the aſcertained uſes in others of thoſe parts of which it was deprived, I have been led to conclude, that nervous influence is not at all neceſſary to the growth of the fœtus in utero. At an early period after conception, it is highly probable, that the augmentation of the fœtus is maintained by the circulating ſyſtem alone; and as it is ſelf-evident from this caſe, that it can go on at a later, without either brain or ſpinal marrow, the nerves muſt grow like the other component parts of the body, and perfectly diſtinct from any other influence than that of the circulation.

It is proved by experiment, that when the ſpinal marrow, or principal nerves of a limb are divided, the parts below are immediately deprived of their ſenſibility, and become torpid; hence, we may reaſonably infer, that no peculiar property is reſident in the nerves themſelves. Aſſuming then, that the nerves ſerve merely to convey the influence of the brain and medulla ſpinalis, it is obvious, that when deprived of theſe ſources, they can impart none. Thus, it is evident, that although this fœtus had attained the full ſize, and its motions were not perceptibly different from another, yet, having no ſenſorium, it could poſſeſs no ſenſation.

Throughout

Throughout all Nature we obſerve the wiſdom of Providence, in adapting the ſtructure of every animal to its peculiar mode of exiſtence. In the fœtus, we note ſeveral contrivances for the uterine ſtate, which become unneceſſary ſoon after birth; as the foramen ovale, the funis umbilicalis, and the ductus arterioſus; the thymus too may be numbered, though its uſe be at preſent unknown: others, as the lungs, then lie dormant, and are called into activity by its change of condition. But, to beſtow their proper functions on the nerves, would then be at leaſt a work of ſupererogation, as there is no object to which the impulſe derived from ſenſation could be deſtined. On the contrary, ſenſibility would expoſe it to hazards, which Nature has been ſedulous to avert, by depriving the funis of nerves, and by ſurrounding it with the liquor amnii.

Mr. Barlow informs me, that he has repeatedly tried the experiment upon a preſenting upper or lower extremity, and that the reſult has always confirmed my opinion.

As far as I have been able to determine, ſenſation is coeval with reſpiration; for when, after birth, reſpiration has been delayed, and during the pulſation in the funis no appearance of ſenſation has ariſen till the child began to breathe, the functions of the lungs, and of the nervous ſyſtem, were then rouſed into activity in the ſame moment of time.

I purpoſely avoid any further diſcuſſion, though the ſubject is pregnant with much curious matter. My object now has been to prove,

1. That nervous influence is not at all neceſſary to the growth of the fœtus in utero; and,

2. That the fœtus in its uterine ſtate does not poſſeſs ſenſation.

The figures will require but little explanation. In No. 1, the dark colour, as it appeared in the ſubject, in the direction of the brain and ſpine, ſhews the deficiences in thoſe parts; and the probe, the hollow portion of vertebræ. A little lower down, the light repreſents the protuberance of the ſpine, the ſolid ſtructure of which is delineated in figure, No. 2; and under the left arm, is given a portion of inteſtine, diſtended with meconium. A cloth was thrown over the legs, becauſe it was thought unneceſſary to repreſent them. The natural and healthy appearance of the ſkin is preſerved, and the maturity of growth well diſplayed. The nerves have not been delineated, as they contained nothing remarkable, either in their ſtructure or diſtribution.

Manchester, July 29, 1800. W. SIMMONS.

N. B. The Drawing is made of the natural ſize.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

AS the firſt object of your valuable Publication is to diſſeminate the knowledge of uſeful diſcoveries, ſo, I preſume, the next, in order as in utility, will be to prevent the propagation of error; and if, in execution of the firſt part of your plan, you ſhould accidentally promulgate any thing, under the idea of its being an uſeful diſcovery, though, in fact, it was previouſly well known, and proved by experience, to be inadequate to what it profeſſes, I apprehend you will not be unwilling to admit ſuch obſervations as may tend to reduce it to its juſt value in the eſtimation of your readers.

The conſideration of theſe circumſtances, which, I preſume, regulate the conduct of your Publication, has induced me to trouble you with the following obſervations on a Communication from Mr. R. WATT, in your laſt Number, which he calls, Deſcription of a New Machine for curing diſtorted Limbs. My intention is to ſhow, firſt, that it is not a new diſcovery; and, ſecondly, that although it may be uſeful on ſome occaſions, it is abſolutely incompetent to effect all that he ſo unreſervedly attributes to it.

In doing this, I have no intention to impeach Mr. Watt's veracity, or the purity of thoſe motives which, he ſays, have induced him to communicate his diſcovery to you; for it may be granted, that he has known nothing more on the ſubject than what has emanated from his own mind; it may be granted too, that he has cured by this inſtrument, ſome deformity that he calls varus, or valgus; and yet, all that I mean to advance in abatement of his claim to the originality or utility of his invention, may be ſtrictly true.

When profeſſional men, in retired ſituations, are induced to turn their minds to particular ſubjects, without previous information, they conclude, and juſtly too, that whatever ariſes in their minds, is *their own invention*; — but, when they introduce their diſcoveries to the world at large, they will often find, and perhaps not without chagrin, that what was new to them, had been previouſly long and well known to many; that, what in their limitted experience ſeemed to be advantageous, had been found ineffectual in the hands of many others; and, they will gain this advantage by this diſcovery, viz. to be more guarded in their aſſertions reſpecting their own imaginary inventions, and more cautious in aſſigning unworthy motives to thoſe who may not act exactly as they have thought proper

proper to do. This I believe to be Mr. Watt's ſituation, for the following reaſons:

Firſt, When I was in Dublin, in the year 1796, a gentleman employed me to cure his child's diſtorted foot. Upon enquiring what, if any thing, had been done previous to my ſeeing the caſe, I was told the late Mr. Deaſe had been conſulted, and he adviſed the parents to ſend for a pair of the well-known Edinburgh boots: he deſcribed theſe as being intended to preſs and compreſs the feet till they were reduced to the natural form. I had no communication with Mr. Deaſe on the ſubject; but as he deſcribed the inſtrument as being well known in Edinburgh, and attributed the ſame powers and mode of operation to it as Mr. Watt does to his *invention*, I have ſome reaſon to conclude they are not very diſſimilar.

Secondly, Dr. Aitkin, in his Eſſays on Fractures, &c. deſcribes an inſtrument for the ſame purpoſe, and which is to act in the ſame manner upon the diſtorted feet of children; he gives a plate of this inſtrument, which certainly reſembles that of Mr. Watt's in part. In deſcribing this plate, he ſays, the machine much reſembles the boot of Hildanus. Here is both ancient and modern information, which have moſt unaccountably eſcaped that ſpirit of reſearch, which induced Mr. Watt to turn over "every volume of ſurgery he could lay his hand on, without finding any thing to his purpoſe."

Thirdly, It is at leaſt fifty years ſince a ſhoe-maker, whoſe name was Holmes, made known, as his invention, a method of curing the diſtorted feet of children: It conſiſted in binding them firmly, and then inſerting them in a pair of boots or ſhoes, that are connected together by means of a ratchet and ſpring. His intention was, like that of Mr. Watt, to preſs upon the convex ſide, and then twiſt and turn the feet out; and we ſee the means he uſed are the ſame. As this man practiſed his art for the reſt of his life, and a perſon is ſtill living who continues to do ſo, their long experience may prove more than Mr. Watt's; it is well known that they have *imperfectly cured* ſome very ſlight caſes, but they never were able to cure completely any one important caſe of diſtortion.

Having ſaid thus much on the *originality* of Mr. Watt's invention, it remains to conſider its *efficacy*; for, after all that can be ſaid, it is of little conſequence whether a man makes a diſcovery, borrows the deſign of another, without leave or acknowledgment, revives an obſolete or gives publicity to an obſcure invention, provided that ſociety at large is benefited by his communication; Mr. Watt ſays the individual is ſure of being rewarded as he deſerves. It is to be wiſhed that the terms varus and valgus, as applied to theſe deformities, were

baniſhed

baniſhed from our Vocabulary; for as they only deſcribe the poſition of the foot, without indicating the ſtate of the diſeaſed parts, and are applied indiſcriminately to all, they only ſerve to confound inſtead of illuſtrating the ſubject. Even Mr. Watt *ſeems* to have but very crude ideas of the facts of this diſeaſe; he ſays, "THIS DISORDER (i. e. the two diſeaſes called varus and valgus) may be occaſioned by different cauſes; by a morbid ſtate of the bones, or contraction of the muſcles; by original mal-conformation, or wrong poſition in the womb. *But from whatever cauſe the diſtortion may proceed, the reducing the bones to their natural poſition muſt be accompliſhed by nearly the ſame means; that is, by judicious preſſure upon the convex ſide. In ſome* caſes the diſorder lies in the ancle joint, while the leg and knee are perfectly natural; in others, *and perhaps the greateſt number, it is occaſioned by a bending of the bones of the leg*, by which the toes are turned either out or in, according as the bones are bent to the one ſide or the other."

I ſhould be ſorry to miſrepreſent, though the obtuſeneſs of my intellects may oblige me to miſunderſtand, Mr. Watt's meaning: If I do underſtand it, it is this; that when the firſt caſe was put under his care *he had never ſeen ſuch a caſe treated before*; he immediately began to turn over every volume of Surgery he could lay his hands on; but finding nothing to his purpoſe, he BEGAN to think for himſelf, and, *fortunately*, fell upon the following contrivance, which, he is happy to ſay, has anſwered his purpoſe extremely well.

From this it is evident, that all his actual knowledge of the diſeaſe, its cauſes, conſequences, and method of cure, was derived from this *ſingle caſe*; for the ſecond caſe he relates, came to his hands after his communication to you was written and ready to be ſent off; of courſe, is only to be conſidered (if I may adopt a parliamentary phraſe) as a rider placed upon the back of the original bill, in hopes it might add to the conſequence of that, though itſelf had no pretenſions to any importance at all. And, conſidering he has built all his ſuperſtructure upon this ſlender foundation, it is not very ſurprizing that he ſhould ſometimes be miſtaken, often inaccurate, and not unfrequently obſcure.

I have been occupied upon this ſubject almoſt twenty years, during that time have ſeen ſeveral hundred caſes, including, perhaps, all the varieties of the diſeaſe, and am warranted in ſaying, I have never ſeen more than one caſe where the feet were turned inwards, and the bones of the legs *bent*; on the contrary, in all thoſe caſes except the one I allude to, the bones of the legs were ſtraight, in moſt of them preternaturally ſo.

As

As I have fully explained this fact in another place,* I content myself with asserting here that it is so, and hope your professional readers will examine more than one or two cases, before they regulate their opinions by the dictum of Mr. Watt.

Mr. W. says, "From whatever cause the distortion may proceed, the reducing *the bones*" (i. e. as I suppose, the parts concerned in those distortions) "to the natural position must be accomplished by nearly the same means, viz. by judicious pressure upon the convex side."

It is to be observed, that in those diseases where the feet turn inwards, and which, I presume, Mr. W. will call valgus, the deformity is occasioned by deranged combination of the bones of the foot, though in some the legs may be bent: that where the feet turn out, and I suppose these deformities are to be called varus, there is more frequently distortion of the bones of the leg, and the feet are frequently so pressed against the fibula while in utero, as to make the feet as flat as the hand of an adult; it is difficult to believe the same mode of treatment will cure both. If I may venture to add my mite to the intelligence of Mr. Watt, I should say, there is, in every case, one condition of the bones that will require peculiar treatment; there is another condition of the ligaments, and a third of the muscles; that each require treatment peculiarly adapted to them; and I can safely aver, that of more than an hundred cases which I have cured perfectly, no two were exactly alike, or could have been cured without adapting the mode of treatment peculiarly to each. If, after considering this fact, Mr. Watt will continue to say that all these diseases may be perfectly cured by being squeezed into the boxes he has described, I believe few intelligent practitioners will support his opinion. As all that Mr. Watt says, though *he is inclined to think there is no kind of distorted limb, however formidable it may appear, but may be cured by the same means*, depends upon what has been done in two (no doubt very slight) cases, and he has given *general accounts* of the diseases to which he proposes to apply the same mode of treatment, and which accounts are not very correct or just, it will be needless waste of time to follow him through the description of his plan; one particular, however, is too remarkable to pass unnoticed; he says, "*To keep the child quiet while we were putting on the instrument, and through the night, I found it necessary to use a gentle opiate once in twenty-four hours. This, however, did no hurt to the child's health; and as soon as the operation was finished, we gave it up entirely!*"

Mr.

* Practical Essay on the Club-foot.

Mr. Watt has said the cure was done with the greatest *ease*; now, if this was so, surely the regular use of opiates was unnecessary; if, on the contrary, as I have no doubt was the fact, Mr. Watt's squeezing system was so uneasy to the child, that he could not be kept quiet while the instrument was putting on, or obtain a single night's rest *without a gentle opiate once in twenty-four hours*, it was natural for Mr. W. to keep his patient under the influence of narcotics during the whole time he was performing the cure. The medical reader will accept this as a *strong proof of the ease of Mr. Watt's operation*; and it may induce him to entertain some doubts, even if there were no stronger reasons to doubt it, of the propriety of adopting a plan that includes *the necessity of keeping even an infant under the influence of* soporific drugs during the whole time of performing a cure.

Having shewn what he has done, Mr. Watt proceeds to shew what he thinks *may be done by his invention*; and as there are strong reasons for not misrepresenting what he has said on this subject, I trust I shall be excused for making the following extract from his description, &c.

He says, "*When I first thought of this instrument*, I had no idea of its being applied to any other case but the vari and valgi, and these only when the disorder happened to lie in the ancle joint. *But I have since thought*, that by a small alteration, it may be applied to all the different kinds of distorted limbs with considerable ease and advantage.

"Fig. 2, represents the half of the machine, in every respect similar to the one above described, save only, that one of its sides from the heel up is removed, *and in place of it a spring, the under end of which is fixed at* E, *to the side of the heel*; *the other, by means of the strap* F, *to the top of the machine. The convex side of the spring, stuffed and covered with soft leather, being applied to the convex side of the limb, by means of the strap* F, *any degree of pressure can be made, which the practitioner may judge necessary.* The side of the leg of the machine, opposite the spring, must have a head as represented at G, to rest against the outer or inner condyle of the femur, according as the case may require. *If the bones are bent forward, as is often the case, by fixing the spring upon the fore side, and causing it to press upon the convexity of the limb, they may be cured in the same manner as above directed.* By using a spring instead of straps round the limb, as directed by Mr. Benjamin Bell, a more uniform and effectual pressure can be made. *With regard to the strength of the spring, no general rule can be given; this must depend entirely upon the age of the patient, or the degree of force required to straighten the limb.*"

Thus

Thus far Mr. Watt. Will you excuse me, gentlemen, for informing you, that I have been employed many years upon this subject; having considered this class of diseases in a light they had never been placed in by any person whatever; having, by reiterated experiments, discovered and perfected a method of curing them much more effectual than any that had previously been known, I obtained a patent to secure the benefit of my discovery to myself for the usual term: In doing this, however, I did not incur Mr. Watt's censure by "concealing, as far as possible, my discovery from the public;" on the contrary, I resolved to make it as public as possible, from a conviction that by so doing I should extend its utility, and, of course, my own reputation.

In 1798, I published a Practical Essay on the Club-foot, &c. with a view to ascertain how far they were curable; and in that Essay I inserted a correct copy of the Specification of my Patent, with plates engraved from the drawings which accompanied it. As that Essay has acquired a character which it would not become me to describe, I shall content myself with making an extract from the specification contained in it, which extract relates to the subject in question. (*Practical Essay on Club-Foot*, p. 198.

"I shall illustrate the method of treating those distortions or deformities which arise from the improper form of bones, by explaining the treatment of curvature in bones of the leg, which is one of the most frequent diseases of that description; *whether the bones bend inwards, outwards, or forwards, is of no consequence, as the principle on which the remedy is to be applied is the same in all.* Figures 1 and 2, hereunto annexed, represent a child's leg, bending outwards; the lines marked with A, B, C, in both figures, represent the curved spring, intended to correct this deformity. It is evident, that if this spring is, by bandage or otherwise, at *a*, *d*, and *c*, *e*, in fig. 1, brought into contact with the leg, the inside of the knee, as at *d*, in figure 1, and *a*, in figure 2, and bottom of the leg, which correspond with the ends of the spring, will form resting points for the spring to act *from*; while its re action, by producing pressure on the projecting part of the curve of the leg, reduces the bone towards its natural state. The same effect will be produced by either of these methods, the difference between the modes of producing the effect being, that in figure 1, the bandages at *a*, *d*, and *c*, *e*, form the resting points, and pressure is made upon the curve of the bone by the spring at *b*. But in figure 2, the ends of the spring, *a* and *c*, form the resting points, and the re-action of the spring produces pressure from the bandage, *b*, *d*, upon the curve of the bone."

The resemblance between Mr. Watt's invention and mine is very evident, but the priority is indisputably with me.—Mr. W. may perhaps say, he has never seen my book; and, considering the distance of his residence from the metropolis, he may, perhaps, say so with truth: But it is to be remarked, that before the publication of my book, viz. in Sept. 1797, the proprietors of the Monthly Magazine inserted a detailed account of my Specification, with the explanatory plates, in their publication, which, from its very extensive circulation, it is most probable did fall into Mr. Watt's hands; though its contents made so little impression on his mind, that, at a subsequent period, he actually mistook the part I have quoted for the offspring of his own brain.

After saying thus much upon the resemblance of Mr. Watt's invention to mine, it is necessary to remark the difference between the inventors. Having by a series of experiments, followed for a length of time, which it would seem like affectation to dwell upon, discovered a new and effectual method of curing these diseases, I then made it public, with proofs that have incontestibly established its superior efficacy; but the effects of a long and successful practice, do not authorize me to assert, in the language of Mr. Watt, that "*there is no kind of distorted limb, however formidable it may appear,*" but may be cured by the same means that have been successful in those cases that I have already cured. Mr. Watt, on the contrary, is accidentally called to a *single case*, which he knows not how to treat; he, naturally enough, began to turn over every book of Surgery within his reach, in hopes of gaining information, but without success; he then sets his own invention to work, and discovers *something* that proves successful; he immediately becomes omniscient on the subject, applies his invention, *in imagination only*, to numberless diseases of various kinds, and determines that all distorted limbs, however formidable they *may appear*, may be cured by the same means. Whence he derives his confidence, cannot be known; it certainly could not be from his knowledge and experience, as he had never seen but one case before he wrote the paper he has communicated to you, and one more before he sent it. This, to some of your readers, may appear absurd; it is not all the absurdity, however, contained in Mr. Watt's communication: For example, in his exordium he says, "Surgery, *so far as he knows*, has made little or no provision to cure the distorted limbs of infants;" and, *immediately afterwards*, he says, "though many have in other places remained, from whatever cause, in that situation for life; yet, *in this part of the country, I have not seen a single instance of one who has not been cured of the disease.*

It

It seems that Mr. Watt is not willing to raise the credit of his own country above its proper level; for if he was inclined to do it justice, and if the latter part of his assertion be true, he should have said, Surgery, in that part of the country, has done a great deal in the cure of these diseases.

As Mr. Watt justly censures the impropriety of resorting to itinerants, quacks, and *pretenders*, upon such subjects, and exposes the falsehood of the opinion held by some, that regular surgeons can do nothing for the cure of these distortions, it is not a little surprising that when Mr. W. was called to the case of Wardrop, he had no knowledge of the proper method of treating it; it is *more* surprizing that notwithstanding the disease had been extirpated root and branch from all the surrounding country, (undoubtedly by the exertions of regular practitioners) no friendly practitioner was to be found in the neighbourhood, to inform him by what means the disease had been so perfectly and universally cured. This argument might be extended to greater lengths than I chuse to push it; for the train of ideas that Mr. W. indulges himself in, is too obvious to be mistaken by the most superficial reader.

Mr. Watt has laid much stress upon the saving clause, which he expresses by the words "*if taken in time*," with which he qualifies all his curative assertions; it is to be regretted that he has not afforded some criterion, by which the less experienced practitioner might have a chance to determine à priori, when it is not too late to undertake a cure of this kind with a probability of success. As he has not done this, however correct the ideas may be which he annexes to those words, they will afford a convenient subterfuge to palliate the want of success in every case; thus, if any person should attempt to practise that which Mr. Watt has only *thought must be universally successful*, IF TAKEN IN TIME, and finds he does not succeed, the failure must not be attributed to want of efficacy in the means employed, or want of knowledge and experience in the operator, but merely to the circumstance of the patient not having applied till it was too late to cure him; and thus, according to this system of logic, the method of cure may be good, if not a single patient should ever be cured by it.

As few intelligent men will believe, that Mr. Watt's system of squeezing the distorted feet of children into tin or leather boxes, &c. will be more successful than it has been, though attempted and recommended in various ways for many years past, that part of the subject may be left to its fate: But as the other part of his INVENTION, which he has only *thought* must be successful if applied to all the different kinds of distorted limbs, &c. so much resembles the description of

my invention, which was inserted with explanatory plates in the Monthly Magazine, that I shall believe it was copied therefrom, until there is strong proof to the contrary, may I be permitted to mention what my experience authorises me to say upon what Mr. Watt *conjectures* may be the consequence of applying *his invention* in such cases? It is this; if any person should apply the instrument described by Mr. Watt, to such cases as he there recommends it for, he will find it *perfectly useless*, because he will find it will not be possible to keep it so long in its proper situation as to produce any effect whatever.

I am to apologize for having obtruded longer upon your patience than I intended; but, I trust you are sensible that there is no circumstance more certain of producing mischief in any part of the healing art, than that of obtruding crude notions of any disease, and recommending modes of curing that disease as certain of being successful, though only founded upon some trifling experiment, and hope you may think the time not unusefully employed, that has been occupied in placing the importance and originality of Mr. Watt's communication in its just point of view.

Though a reader of your Journal from its commencement, I did not suppose this subject would have found a place in it; I now entertain a different opinion; and if you should think it deserving your attention, will trouble you with an account of some facts that have not been generally thought possible; among others I shall endeavour to ascertain at what period it is not too late to undertake the cure of distortions in the feet, &c. I shall prove that persons born with such defects, have been perfectly cured at the age of nine, ten, or eleven years; and I shall infer from thence, that many cases of this kind, which have long been abandoned as incurable, may be perfectly restored to their natural state: This, if you approve of it, will be the subject of my next communication. I am,

GENTLEMEN,

Your most obedient servant,

No. 50, Strand. T. SHELDRAKE.

STATE.

STATE OF DISEASES IN LONDON.

Diſeaſes admitted under the Care of the Phyſicians of the Weſtminſter Hoſpital, from the 23d of July, to the 20th of Auguſt, 1800.

Continued Fever	13	Epilepſy	1
Intermittents	1	Gaſtrodynia	1
Pleuriſy	1	Hæmorrhois	2
Sore Throat	1	Hydrops Ovarii	1
Enteritis	1	Hyſteria	1
Amenorrhœa	2	Jaundice	1
Anaſarca	3	Lepra Græc	1
Aſthenia	9	Menorrhagia	2
Catarrh	1	Opthalmia	2
Cholera	4	Phthiſis	4
Cough	4	Rheumatiſm	7
Diarrhœa	4	Vertigo	1
Enterodynia	2	Urticaria	1

Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20th of July to the 20th of Auguſt, 1800.

	No. of Caſes.		No. of Caſes.
ACUTE DISEASES.		Hemiplegia	2
Typhus	12	Chorea	1
Ephemera	2	Lumbago	1
Dyſentery	6	Sciatica	1
Cholera Morbus	15	Chronic Rheumatiſm	6
CHRONIC DISEASES.		Pſora	2
Cough	7	Prurigo	5
Cough with Dyſpnœa	3	Herpes	7
Hoarſeneſs	2	Tinea	2
Hæmoptyſis	4	Papulous Eruptions	12
Phthiſis Pulmonalis	6	PUERPERAL DISEASES.	
Dyſpepſia	7	Mania	2
Gaſtrodynia	12	Low Puerperal Fever	3
Bilious Diarrhœa	14	Rhagas Papillæ	4
Colica Pictonum	2	Menorrhagia Lochialis	6
Hæmatemeſis	3	INFANTILE DISEASES.	
Hæmorrhois	4	Herpes Miliaris	7
Fluor Albus	3	Herpes Exedens	5
Amenorrhœa	5	Diarrhœa	10
Menorrhagia	6	Aphthæ	5
Cephalalgia	7		

The exceſſive heat of the weather, which has for ſome time prevailed, has been attended, as might be expected, with a conſiderable aggravation of the ſymptoms of many diſeaſes. Inſtances of Typhus have been numerous, and very generally attended

attended with great determination to the head. Some patients labouring under this disease complained of confusion of ideas, whilst others were affected by considerable pain of the head; and in a few instances a high degree of delirium prevailed. In two puerperal cases the patients became maniacal; one of them recovered in a few weeks; but in the other case the disease terminated fatally.

Cholera Morbus has been very frequent, and in some instances particularly obstinate. The excessive discharge from the stomach and bowels which takes place in this disease, may at first view seem to require the use of powerful astringents to abate its violence; but the judicious practitioner is aware that considerable caution is necessary in the use of such means. Whilst opiates may be freely used to abate pain, and counteract the spasmodic affections of the lower extremities, if, under the use of them, a SUDDEN check is given to the discharge from the intestines, it sometimes becomes necessary to promote it by the use of some eccoprotic remedies. One instance occurred to the Reporter wherein a sudden, though SPONTANEOUS, cessation of the intestinal discharge was followed by such violent pain of the bowels as gave considerable alarm, and rendered the use of some active means necessary to restore the discharge, but which, as soon as it took place, was followed by a cessation of pain, and a gradual recovery to health.

MONTHLY REPORT of DISEASES,

Admitted under the Care of the PHYSICIANS of the FINSBURY DISPENSARY, St. John's Square, Clerkenwell.

The District, in which the Patients of the Finsbury Dispensary are visited, comprehends the Parishes of St. James, and of St. John, Clerkenwell; of St. Luke; of St. Sepulchre within and without; of St. Bartholomew, the Great and the Less; the Liberties of the Rolls, and of Glass-House Yard; the Town of Islington; the Parishes of St. Pancras; of St. Andrew, Holborn; and of St. George the Martyr, Queen's-square. This Tract of Ground may properly enough be termed, a North Western District of the Metropolis.

LIST of DISEASES, &c. from July 20, to August 20, 1800.

	No. of Cases.		No. of Cases.
Cholera and Diarrhœa	67	Amenorrhœa	15
Dysenteria	4	Leucorrhœa	6
Colica Pictonum	2	Rheumatism	9
Asthenia & Dyspepsia	17	Nephralgia	3
Prolapsus Ani	1	Catarrhus	13
Typhus	19	Pertussis	3
Phthisis	8	Cyn. Tonsil.	5
Menorrhagia	7	Cephalæa	4

Scrophula

Schrophula	8	Vermes	11
Anaſarca	6	Epiſtaxis	2
Pſora	1	Epilepſia	4
Hydrocephalus	3		

The above liſt will ſhow, that the typhoid contagion ſtill prevails in the Finſbury diſtrict, although with a degree of virulence that is by no means equal to that which it exhibited during the preceding month. Rarely has there been a ſeaſon in which this complaint has appeared ſo decidedly epidemic, and ſo troubleſome and alarming in its ſymptoms. The morbid affection of the brain was never, perhaps, a more uniform attendant of this fever, in conſequence, it is highly probable, of the unuſually intenſe and long-continued heat of the ſummer. One circumſtance denoting danger in Typhus, during hot weather, which has not hitherto been, at leaſt publicly, noticed, is the fixing of flies upon the face, neck, and arms of the patient, a circumſtance which may partly ariſe from his indiſpoſition or inability to drive them away; but ſtill more perhaps from a tendency to a cadaverous ſtate, as it is well known that theſe inſects have a particular attachment for bodies which the vital principle has either deſerted altogether, or on which its operation is in any conſiderable degree diminiſhed.

During this laſt fortnight the fever, vulgarly called putrid, has been gradually diſappearing, and Cholera, as is uſual in the autumnal period of the year, has become the popular diſorder. This is a complaint which requires more vigilance on the part of a medical attendant than perhaps any other by which the human conſtitution can be attacked, as it is not uncommon for it to carry off the patient, by its fatal violence, in the courſe of ſo ſhort a period as four and twenty hours.

W. W.
J. R.

No. 63, Hatton Garden.

Experiments, by Dr. Charles Darwin.

[Continued from p. 102, of our laſt.]

Exp. XVII. To a ſmall quantity of *coagulable lymph*, obtained by waſhing away the red globules from ſome craſſamentum of blood, I added about fifty drops of *acid of vitriol*; which changed the colour of the lymph to a reddiſh brown, but did not apparently diſſolve any of it.

Exp.

Exp. XVIII. To No. xvii. about an ounce of water was added without producing any obfervable change in the fluid, but the lymph after this feemed more denfe than before Experiment xvii.

Exp. XIX. One drachm of *cauftic lixivium* took five hours to diffolve the greater part of four grains of *coagulable lymph*; the remainder of the lymph had acquired a brown red colour, and was fofter than before it was added to the alkali.

Exp. XX. Water added to xix. produced a feparation of a whitifh fediment.

Exp. XXI. Equal parts of *ferum* and *cauftic lixivium* eafily united, and fuffered no change on the addition of eight or ten times their quantity of water; though after ftanding fome hours the mixture depofited a flight fediment.

Exp. XXII. Twenty-five drops of *vitriolic acid* added to one drachm of *ferum* converted it into a whitifh curdled matter.

Exp. XXIII. Water being added to No. xxii. the whitifh curdled matter was eafily difperfed through it; but foon formed a cloud near the top of the glafs. On the addition of more ferum to this mixture, it was converted into a fimilar matter.

Exp. XXIV. One drachm of *nitrous acid*, after fome time, diffolved three grains of *coagulable lymph*, with fumes and froth.

Exp. XXV. Water added to this, produced a dilute *green fluid*.

Exp. XXVI. *Acid of nitre* diffolved *mucus*, and with water occafioned a turbid dirty-coloured fluid.

Exp. XXVII. A faturated folution of *corrofive fublimate* coagulated *mucus* into a harder white material.

Exp. XXVIII. (This and the following Experiments were tried on Pus from a fuppurated mamma.) *Pus* diffufed readily through *pure water*, forming a white milky opake fluid, but after fome length of time fell down to the bottom of the glafs, where it had no great vifcidity; the fluid above it was for fome hours of a reddifh yellow colour, but became at laft colourlefs. By agitation the pus was again diffufible, but did not remain fo long fufpended as the firft time; and the fluid was immediately after its precipitation clear and colourlefs.

Exp. XXIX. *Acid of vitriol in fmall quantity* exhibited the fame appearances with this *pus* from a fuppurated mamma, as in No. 1, &c.

[To be continued.]

To

To Dr. BRADLEY.

SIR,

I Have ſent you four hoſpital caſes of Diabetes Mellitus, three of which have been ſucceſsfully treated, and the other in ſome degree relieved, by the adminiſtration of the Nitrous Acid largely diluted. They are copied from a book wherein I make minutes of all the caſes which come under my care. If you think they deſerve a place in your periodical Work, you are at liberty to inſert them.

The urine of Giſſing and Maſon left a good deal of ſaccharine matter after evaporation, which was of a very dark colour, and of the conſiſtence of very thick treacle. I do not recollect, neither can I aſcertain from the minutes, what proportion the quantity of ſaccharine reſiduum bore to the quantity of urine ſubmitted to the experiment. I ſhould have made ſeveral more experiments upon the urine of the different patients if I had not been too much engaged at the time.

Mr. Chavaſſe, of Walſall, a gentleman of eminence in his profeſſion, has juſt ſent me a caſe of Diabetes Mellitus ſucceſsfully treated by himſelf, which I have alſo incloſed, and which I ſhall be obliged to you to make public.

I am, SIR,

Your obedient humble ſervant,

July 31, 1800. WILLIAM GILBY,

Phyſician to the General Hoſpital, near Birmingham.

CASE I.

Anthony Giſſing, aged 42, (admitted January 17,) complains of great weakneſs and inceſſant thirſt. Tongue dry and parched, particularly in a morning; ſkin dry, and harſh to the touch; feels great fulneſs of the abdomen, which is hard and viſibly enlarged; makes 14 pints of urine (which is ſweet and of a pale colour) in the 24 hours, although his drink during this period does not exceed 10 pints; pulſe 90; bowels coſtive; appetite not good, which he attributes to his having lived almoſt entirely upon animal food for ſome months paſt; ſays that he has loſt fleſh very much within the laſt half year.

Preſcription, with reſpect to diet, to live more upon animal than vegetable food, and to have, inſtead of malt liquor, two ounces of brandy mixed with water twice a day.

Capiat ſeri aluminoſi ʒiv, ſextâ quâque horâ et pulveris rhei gr. xv. pro re nata ex quovis vehiculo idonco.

Jan. 23. Says that he feels himſelf weaker ſince he came

into the hoſpital, and that the urine, with reſpect to quantity, taſte, and colour, is the ſame; thirſt increaſed, but has refrained from drinking, as he did not wiſh to exceed 10 pints in the 24 hours; bowels ſtill in a coſtive ſtate.

℞. Decoct. hordei (additis ſub finem coctionis rad. glycyrrhiz. incis. ʒiij } ℔ ij.
Acidi nitroſi) - - - - - - - - - ʒ j.

Fiat miſt. cujus coch. v. vel vi. ter quaterve intra viginti quatuor horas capiat.

Jan. 26. Reports that he has taken 10 pints of liquids, and made 12 pints of urine, ſince the morning of yeſterday.

Capiat miſt. acid. coch. vj. ſextâ quâque horâ.

Jan. 28. Drink, 9 ½ pints in 24 hours; urine, 11 pints, which is ſtill pale coloured and ſweet; feels leſs pain in the abdomen, which, upon examination, is not ſo hard, nor ſo much ſwelled as it was at the time of his admiſſion.

Jan. 30. Drink, 9 pints; urine, 10 pints; complains of pain in his ſtomach and bowels. The urine is of a better colour, and leſs ſweet.

Omittantur aliquot doſes miſturæ acidæ. Capiat tinct. opii camphorat. ʒj. vel ʒjſs. urg. ventric. vel inteſtinorum dolore ex infus. flor. cham. poculo.

Feb. 2. Drink, 8 pints; urine, 9 pints; belly much ſofter. The pain having gone off, he yeſterday took eight ſpoons full of the acid mixture for a doſe.

Sumat miſt. acid. doſin ſextis horis et bibat ſubinde infus. Cinchonæ flavæ poculum.

Feb. 7. Drink, 8 pints; urine, 7 pints, which is not ſweet; thirſt abated, but is yet troubleſome; pulſe 80.

Feb. 9. Drink, 7 pints; urine, 8 pints, which has had no ſaccharine taſte for the laſt five days; feels ſtronger; ſays he thinks he ſhall recover, as the urine has loſt its ſweetneſs.

Adde miſturæ acidi nitroſi ʒſs. capiat uncias quatuor quintâ quâque horâ.

Feb. 14. The report the ſame as on the 9th, except that the urine is rather leſs in quantity.

Feb. 18. Drink, 7 pints; urine, 7 pints.

Feb. 23. Drink, 6 pints; urine, 6 ½ ditto.

Feb. 27. Report the ſame as on the 23d; bowels ſtill coſtive, but free from pain.

Capiat pulv. rhei. gr. xv. ex infus. ſennæ ʒij. pro re nata.

March 6. Drink, 5 pints; urine, 6 pints.

Loco ſp. vin. gallic. habeat cereviſiæ fortioris ℔ j. quotidie.

Mar. 15. Report as on the 6th.

Augeatur quantitas cereviſiæ ad ℔ ij. doſin miſt. acid. ſpatio horarum octo ſemel tantummodo capiat.

Mar.

Mar. 21. Drink and urine the ſame as on the 6th; feels himſelf conſiderably ſtronger, ſince he has had a larger allowance of ale. The urine made in the night is ſometimes a little ſweet.

April 1. Drink, 6 pints; urine, near 7 pints; complains of pain in the ſtomach and bowels.

Capiat opii gr. ſs. cum doſibus miſturæ ſingulis.

April 8. Report reſpecting the urine the ſame as on the 1ſt inſtant. Pain continues.

Capiat opii gr. j. nocte maneque cum miſt. acidæ unciis quatuor.

April 15. Drink, 6 pints; urine, 6 pints.

Diſcharged at his own requeſt.

This patient might have gone on better if he had not been guilty of ſome irregularities. He obtained leave to go into the town one afternoon, got intoxicated, and experienced the uſual ſymptoms of debility afterwards. His thirſt increaſed; and he had, for a day or two, an increaſed diſcharge of urine. At the time he left the Hoſpital the urine had its proper colour, taſte, and ſmell. I wiſhed him to remain ſome time longer; but as he had a family, and had regained his ſtrength, he wiſhed to return to his work. He was deſired to ſend an account of himſelf at the end of a month, and was promiſed a further ſupply of medicine if the urine ſhould at that time exceed 4 pints in the 24 hours. No account has ever been received either by the apothecary or myſelf. He lives many miles from Birmingham, and I am unacquainted with his addreſs.

CASE II.

Mary Jeſſop, aged 43, admitted Feb. 20th, complains of great thirſt, and loſs of appetite. Tongue dry, and very much furred, eſpecially in a morning; has great heat at her ſtomach, and is frequently troubled with bilious eructations. Says that her belly has become ſore and enlarged within the laſt ſix months. Makes betwixt nine and ten pints of urine in the 24 hours, which is ſweet, and of a very pale colour. The quantity of liquids taken within this period, ſhe reports to be about four pints and a half. Has a conſtant pain in her legs and thighs. Pulſe near 100. Stools regular. Has had no menſtrual diſcharge for ſome months paſt.

Capiat miſt. acid. ut pro Giffing præſcript. coch. iij. vel iv. octavâ quaque horâ.

Feb. 23. Drink, 4 pints; urine, 8 pints, ſince the morning of yeſterday, when ſhe began to take ſix ſpoons full of the acid mixture for a doſe.

Adde mistura acidi nitrosi ʒss. capt. coch. vi. sextâ quâque horâ.

Apr. 25. Drink, 4 pints; urine, 7 pints; in the 24 hours.

Apr. 27. Drink, 4 pints; urine, 6 pints.

March 3. Drink, 4 pints; urine, 5 pints. Pulse 84; pains in the legs and thighs nearly gone; belly less swelled, and free from soreness; thirst abated; urine, made in the day, not sweet, and of a much better colour.

March 8. Report respecting the drink and urine the same as on the 3d. Bowels costive.

℞. Pulv. rhei. ʒjss infus. sennæ ℔ss. M. cap. coch. iij vel iv pro re nata.

Mar. 15. Drink, 3½ pints; urine, 5 pints, which is seldom sweet and of a proper colour. Has had several purging stools in the night. Omittatur mist. acida.

℞. Mist. cretacea ʒxiv. sp. cinamom. ʒij. M. cap. coch. vi ter quaterve die donec alvus comprimatur. Capiat horâ decubitus opii gr. ss.

Mar. 21. Drink, 4 pints; urine, 4½ pints. Bowels easy, stools regular.

Mar. 27. Drink, 3½ pints; urine, 4 pints, which has no sweet taste, and is of a proper colour. Says she feels very comfortable, and wishes to be discharged.

Jessop was so much reduced by the disease, that it was quite a fatigue to her to go up stairs, or even move about the house; to use her own words, "She had no power to do any thing." She had been under my care several months before she came into the hospital, had lived as much as possible upon animal food, abstained from all fermented liquors, and had taken most of the remedies usually given in a Diabetes, but without deriving any benefit. At the time of her admission, I directed her to take the common diet of the house, but to abstain from malt liquor; as a substitute for which, she was allowed to have, now and then, a little very weak brandy and water. This soon became disagreeable to her, and orders were given that she should have half a pint of ale two or three times a day. After she had been in the house about ten days, her appetite was much improved, digestion tolerably good, and she was able to walk about the ward with very little fatigue.

CASE III.

John Nichols, aged 45, admitted an out-patient on May 2; complains of great thirst, soreness, and fulness of the abdomen; makes ten pints of urine in the 24 hours, which is sweet, and of a very pale colour, but is uncertain as to the quantity of liquids

quids which he takes during this period; thinks it does not exceed five pints. Pulſe 86. Says he takes a great deal of food without being ſatisfied.

℞. Acidi nitroſi ʒjſs. decoct. hordei ℔jſs. ſyr. ſimp. ℥ij ft. Miſtura cujus coch. iv. cum aquæ eadem quantitate ter die capiat.

May 13. Liquids drank, 4 pints; urine made, 6 pints. Says he has no foreneſs in his belly, very little thirſt compared with what he had ten or twelve days ago. Urine of a better colour, and leſs ſweet.

May 20. Report nearly the ſame as on the 13th; feels much ſtronger; thinks he is able to work.

Capiat miſt. acid. ut antea et bibat decoct. cinchonæ flavæ uncias tres bis die.

May 27. Liquids taken, 3 ½ pints; urine, not 6 pints. Abdomen ſoft, and free from foreneſs; thirſt abated; pulſe under 80.

June 3. Liquids taken, near 4 pints; urine 5 pints, which is of a proper colour, and never ſweet. The fulneſs of the abdomen is ſo far gone, that the waiſtcoat which he wore at the time of his admiſſion, and which was then very tight, is now much too wide.

June 10. Liquids drank, near 4 pints; urine, 5 pints. Says he feels nearly well, but not ſtrong enough to go through a day's work.

Omittantur miſt. acid. et decoct. cinchonæ.

℞. Infus. gentianæ comp. ℔j. Acidi vitriolici diluti ʒij. M. cap. coch. iv ter die.

July 13. Called upon me this morning, and ſays that his health was never better. He cannot ſpeak as to the quantity of urine he makes, but knows that it does not exceed what it ought to be.

Nichols never made any alteration in his diet, and never drank any other thing than ſmall beer and cider.

CASE IV.

John Maſon, aged 23, (admitted January 24) complains of great weakneſs; ſays he has a moſt voracious appetite, and a continual thirſt; makes eleven pints of very ſweet, pale-coloured urine in the twenty-four hours, but cannot ſay what quantity of liquids he takes during this period. Appears much emaciated; pulſe near 100; bowels coſtive.

Capiat miſt. acid. ut pro Giſſing præſcriptæ coch. iv ſextis horis.

Jan. 28. Liquids drank, 7 pints; urine made, 11 pints, ſince

ſince the morning of yeſterday, which is ſtill pale coloured and ſweet.

Capiat infus. ſennæ uncias tres quatuorve quoties alvus ſit aſtricta.

Feb. 4. Report with reſpect to the urine, &c. the ſame as on the 28th ult.

Feb. 9. Liquids taken, 7 pints; urine made, 10 pints. Has pains in his ſtomach and bowels.

Capiat opii pur. gr. ſs. urg. dolore.

Feb. 18. Report the ſame as on the 9th, except that he feels little or no pain. Urine ſweet, and of a pale colour.

Capiat miſt. acid. uncias quatuor quintâ quâque horâ.

Feb. 20. Report as on the 18th, except that the urine made in the day has a ſalt taſte, and is of a higher or deeper colour.

Adde miſt. acid. nitrorſi ʒſs capiat doſin eadem quæ 18vo, erat præſcripta.

Feb. 23. Liquids drank, 7 pints; urine, 9 ½ pints, which is of a much darker colour, and ſeldom ſweet. Legs œdematous in the evening.

Feb. 27. Liquids drank, 7 pints; urine, 9 pints.

March 6. Report as on the 27th ult.

Mar. 11. Liquids drank, 7 pints; urine, 8 ¾ pints. Complains of great weakneſs. Appetite bad; pulſe 86.

Habeat cereviſiæ fortioris ℔ſs ter die.

Mar. 18. Liquids drank, 6 ½ pints; urine, 9 pints, which is ſometimes ſweet and at others ſalt. Says that his nights are bad, owing to griping pains, occaſioned, he thinks, by the acid mixture.

Capiat h. s. opii gr. j vel gr. jſs.

Mar. 25. Liquids taken, 6 ½ pints; urine, 8 ½ pints.

April 1. Liquids taken, 7 pints; urine, 9 ½ pints.

Ap. 8. Report as on the 1ſt. Wiſhes to give over taking medicines, and to try whether a month's reſidence in the country will be of any ſervice, as he begins to loathe all kinds of food.

Omittatur miſt. acid. Bibat aquæ calcis uncias quatuor quartis horis.

Ap. 15. Liquids taken, 7 pints; urine, 9 pints.

Diſcharged.

May 13. Has been drinking the lime-water ever ſince the 15th of laſt month; and ſays that his urine is of a pale colour, and ſweet; and that he generally makes about ten pints in the 24 hours. Appetite is more keen ſince he left the hoſpital.

The acid medicine has not done much for this patient. He lived for ſome weeks almoſt entirely upon animal food, and then

then said it went so much against his stomach that he could not get down any more, unless he were to have an allowance of bread and malt liquor.

Case of Diabetes Mellitus successfully treated by the Nitric Acid; communicated to Dr. GILBY *by* NICHOLAS CHAVASSE, Surgeon in Walsall, and Member of the Company of Surgeons in London.

CASE.

Thomas Pitt, aged 64, applied to me about ten weeks since, with an inveterate Diabetes. He had been a hard drinker for more than twenty years, and had laboured under a profuse discharge of water for thirteen months. When he first consulted me, he was making nine quarts of sweet urine in twenty-four hours: His pulse was weak and frequent; his thirst excessive; appetite very bad, and appearance cachectic. He was directed to live upon animal food, to abstain from vegetables, sugar, and all fermenting liquors; but at any time, when unusually faint, to drink a few glasses of Sherry. He took volatile and fixed alkali alternately in the day, and opium at bed-time. As the latter medicine produced costiveness, he had recourse to the flowers of sulphur to remove that inconvenience. He persisted in following these rules for twelve days; but as œdematous swelling of the lower extremities came on, accompanied with increased debility, hectic fever, and urinous secretion, I thought it prudent to abandon this plan. He was now directed to take every two hours, two ounces of a mixture, composed of a drachm of nitric acid, a quart of water, and one ounce of the syrup of ginger; to relinquish the use of his opium; to eat any kind of food his stomach would prefer; to drink porter at his meals, and four glasses of Port wine after dinner. At the expiration of a week, he called on me again; I found his general health much improved, and the quantity of urine evacuated was diminished to seven quarts. Fearing the acid might irritate the bowels, the use of it was reduced to every four hours; and he continued taking that dose for twelve days longer, when I found him convalescent, and making only five quarts of water in the day and night. Suspecting that this favourable change might be the result of a change of diet, I directed him to eat and drink as he had done the last nineteen days, to discontinue all medicines, and to call on me again in a week. I conjectured erroneously, for five days had scarcely elapsed, when the anasarcous symptoms, and increased secretion of urine both returned. He then regularly

gularly perſiſted in taking the nitric acid every four hours for a month; when the efficacy of the medicine was as conſpicuous as before. He now enjoys better health than he has done for years, and his flow of urine is as moderate as it ever had been. Now we are upon the ſubject of nitric acid, permit me to ſay, I cannot, with truth, unite my evidence to thoſe who have given ſuch flattering accounts of its efficacy in the cure of inveterate ſyphilis; I have tried it, and fairly tried it, in a great number of caſes of lues, in different ſtages of the diſeaſe; and the reſult of all my experience convinces me, that it has no ſpecific powers in curing that diſeaſe. When the conſtitution has been broken down by violent pain, and the exceſſive uſe of mercury, then I know it will relieve local ſymptoms, merely by improving the general health: But here, the mercury muſt be laid aſide, and the ſame good effects may be gained by the vitriolic acid, the bark, or both united; or by ſteel medicines; all of which we know have a tendency to invigorate the digeſtive organs. I do not find, by comparative trials, that the nitric acid poſſeſſes any ſuperiority over the medicines I have enumerated.

I ſhall be happy to find, that the experience of other practitioners will enable them to ſpeak as highly of the nitric acid in the cure of Diabetes as I, with truth, have done in this ſolitary caſe.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

YOUR valuable and truly uſeful Journal needs no encomiums of mine to point out its various merits to an enlightened and diſcerning public; its extenſive circulation through the Britiſh dominions, and the great reſpectability of many of your Correſpondents, among whom I am happy to notice the name of Dr. Denman, are the ſureſt pledges of its ſtability and increaſing celebrity.

The readineſs with which you communicate to the public all facts and obſervations that have a tendency to enlarge the boundaries of Medical Science, or alleviate the miſeries of human nature, induces me to requeſt the inſertion of the following caſes of ſucceſsful treatment of Dropſy, in your next monthly Miſcellany.

In the plan of treatment and cure adopted in theſe caſes, I have

have not to boaſt the diſcovery of any new remedy, either chemical or botanical; no new ſpecific to propoſe, or arcanum to lay open; in this reſpect, the lovers of novelty and wonder will certainly be diſappointed: But although the medicines employed have been long known and eſteemed almoſt by every Tyro, as well as by men of the firſt ability in the profeſſion, yet it muſt be admitted, that when theſe are united, and variouſly combined with no properties chemically repugnant, they may poſſeſs energies and active powers, which ſeparately and diſtinctly adminiſtered, they would wholly fail in.

In the cure of every ſpecies of Dropſy, practitioners in general have two indications in view, that of evacuating the ſuperabundant fluid in the firſt inſtance; and, ſecondly, to guard againſt its farther accumulation. To accompliſh theſe deſirable ends, recourſe is almoſt invariably had to the operation of draſtic purges, frequently exhibited and repeated, ſuch as ſeneka, jalap and calomel, the neutral ſalts, and the occaſional uſe of diuretics. When by a due perſeverance in theſe means, the water is totally or in great meaſure expelled, different tonics, as bark, ſteel, and bitters are employed to reſtore the loſt tone of the conſtitution, and confirm the cure. But although this treatment may have frequently ſucceeded in removing the diſorder in queſtion, yet there is great reaſon to believe that it has been only in young and naturally robuſt habits, where the complaint was of recent ſtanding, and not depending on any previouſly exiſting diſtemper. For, if we are to conſider Dropſy as a diſeaſe commonly of high debility, and conſequently of diminiſhed excitement, whether originally produced by profuſe evacuations of blood, ſuddenly inducing a conſiderable diminution of the vital powers, or by long protracted acute diſeaſes, or other cauſes occaſioning general atony and relaxation of the fibres, we ſhall naturally and juſtly be led to conclude, that theſe violent evacuant remedies have rather a tendency to increaſe the malady by ſtill farther exhauſting the excitability or ſenſorial power, than to remove it.

That this practice is often attended with great danger, and ſometimes with fatal conſequences, we have the teſtimony of Dr. Milman, who ſays, that after the Dropſy is removed, the patients will ſometimes die without any evident cauſe; and again, this reſpectable author obſerves, that we muſt take care not to make too free with the uſe of purgatives if the patient be weak. I might aſk the Doctor with much propriety, if he had ever met an inſtance of dropſy, aſcites, or anaſarca, as a general diſeaſe, that was not accompanied with and preceded by great debility? Notwithſtanding theſe cautions, and their manifeſt propriety, the Doctor however depends, as Sydenham

and others did before him, chiefly on the good effects of purgatives; for he speaks, among other things, of the advantages arising from a decoction of seneka procuring nine or ten stools a day. Sydenham advises cathartics to be administered every day, unless through the too great weakness of the body, or the violent operation of the purgative, it shall be necessary to interpose a day or two now and then; because, he says, if considerable intervals be allowed to occur between the exhibition of the purgatives, the water will be afforded an opportunity of again collecting.

A careful and diligent investigation into all the phenomena attending Dropsy, will convince every impartial and unbiassed observer, that it is always a disease of diminished, and never of increased excitement; unless when excitement is pushed beyond its due bounds into indirect debility, as is frequently the case with men who indulge too freely in the luxuries and conviviality of the table, whose dissolution is not unusually preceded by this very disease: But still debility, whether of the direct or indirect species, and however induced, must precede and accompany it throughout all its stages.

If this view of the question be just, and founded on accurate observations deduced from the phenomena known invariably to attend the disease, how many lives, then, must annually have fallen a sacrifice to the common but mistaken practice? a practice grounded on false and erroneous theory; a practice which, instead of opposing the destructive tendency of the disease, is in direct unison with it; an accredited error sanctioned by ages, and maintained on the authority of great names, but which will be discarded the moment we have courage to reason from effects to causes, and to consider real facts divested of the influence of splendid but illusive systems. I am unacquainted with any cause which has operated more powerfully against the extension and improvement of medical science, than implicit confidence in certain illustrious names and systems of physic: The mind resting with a kind of fatal security on the supposed truths of those oracles, suspends its own inquisitive propensities and energies, thereby effectually shutting up all avenues to enquiry and investigation.

Convinced by experience of the inefficacy and pernicious consequences of employing evacuant and debilitating remedies for the cure of a disease depending on atony and relaxation, more especially of the vascular system, I pursued a course diametrically opposite.—I endeavoured to support and invigorate my patients by the most powerful and permanent stimuli, both with respect to medicines and diet; and with these were joined active diuretics, in order to stimulate the kidneys and determine

mine the serous fluid to those passages. In short, to strengthen the habit, to restore the energy and lost tone of the vascular system, to promote absorption, and finally to expel the serous collections from the body, were the ends proposed: how far I succeeded will be best seen by a narrative of the following cases.

CASE I.

It is to be recollected that I began the treatment of this case on the old plan. James Griebel, a French prisoner, a young man 28 years of age, was admitted into the Hospital at Norman Cross on the 3d of November 1799; he dated the commencement of his complaint about three weeks before, occasioned probably by poverty and want. On examination, I found the abdomen very much enlarged with evident fluctuation, the legs much swelled and œdematous, easily receiving and retaining a long time every impression; a quick, small pulse, a dry tongue, parched skin, great thirst; passed little or scarcely any urine; a short troublesome cough; difficult respiration, so much so that he was obliged to keep in a half erect posture whenever he slept; a sallow, emaciated countenance, with large blotches and scabby eruptions all over the body. He was immediately ordered a brisk cathartic of jalap and calomel, which procured several copious stools and relieved his breathing. On the 5th the symptoms became equally oppressive and distressing. Rep. cathar. with similar effects, though less permanent. 6th, All the symptoms recurred with additional violence, the patient being considerably reduced. Ordered this day a diuretic mixture, Aq. menth. kali, acet. et tin. scillæ. Passed no water except when at the water-closet, and then even very scantily. 8th, Several watery evacuations by the anus yesterday; notwithstanding which, the legs, thighs, and abdomen were more enlarged than ever, with extreme debility and emaciation. It now became evident that the patient would speedily sink, unless relieved by other means. Under this idea he began the following mixture this day: ℞. Aq. menth. ℥vj. ferr. vitriol. kali. myrrh an. ʒj. tin. scillæ. spt. æth. nit. a. ℥ifs. tinct. opii. gt. xl. sumat cochl. iij. 4is. horis. At the same time he was ordered a pint of red wine, and nourishing diet in small quantities frequently repeated. 9th and 10th, no alteration. On the 11th he made considerably more water, but he was still greatly debilitated. 12th and 13th, the evacuations by the kidneys much increased, spirits better, strength amended. 15th, much better. The power of the mixture augmented: Ferr. vitr. kali. myrrh a. ʒij. tinct. op. gt. l. tin. scillæ. spt. æth. n. a. ℥iij. aq. menth. ℥vj. ut antea. S. 17, Quantity of urine now daily 5 pints. 18th, Increased to 6 pints, of a dusky brown colour with much sedi-

ment; treatment the same; all the bad symptoms greatly abated; the legs, thighs, and abdomen considerably reduced; respiration much relieved, thirst gone, appetite good; in short, he was wonderfully amended. 23d, Almost free from complaint, passing daily 6 pints and upwards of urine. His medicines and treatment continued the same till the 30th, at which time he was perfectly restored to health; and on the 4th of December he was discharged to prison, having passed during the last 15 days near 90 pints of water, besides what was lost during operations by the anus. It is worthy of remark, that the tone and vigour of the fibres of the intestinal canal were by this time so completely restored, that he was obliged to take aperients twice, on the 24th and 29th. The scabby eruptions had at first much the appearance of being a species of itch; but before the 30th the skin was wholly cleared from them.

CASE II.

John Colquhoun, aged 42 years, a seaman belonging to his Majesty's ship Le Pompée, was admitted into the Royal Hospital at Plymouth on the 4th of June last, labouring under universal anasarca; his legs and thighs were so astonishingly distended, that it was with the utmost difficulty he could stand; great prostration of strength, dejection of spirits, a troublesome cough with expectoration, thirst, difficult respiration, pain about the scrob. cordis, loss of appetite, profuse diarrhœa; passes no urine except at stool, and then only a few drops at a time. The history of the case previous to admission: He had been affected with cough at least twelve months; the swellings of the extremities began about five weeks before I saw him, and the diarrhœa was chiefly occasioned by the purgatives employed to remove the dropsy; he was, upon the whole, much emaciated and reduced. The state of his bowels became the first object of my care; and having by the use of the cretaceous mixture, tinct. catechu and opium, almost removed this complaint, he began the following mixture on the 7th: ℞. Ferr. vitriol. grs. xv. kali et myrrh a. ℥j. aq. menth. ℥vj. tinct. scillæ. spt. æther nitr. a. ℥ijs. tinct. opii gts. lx. M. capt. cochl. iij. 4is horis. This treatment was continued till the 11th, with little amendment. ℞. Aq. menth. ℥vj. ferr. vitr. ʒs. tinct. scil. spt. æth. n. a. ʒijs. tin. opii. gt. lxx. M. ut antea sumend. wine, nourishing diet and drink without restriction. 13th, The discharge of urine considerable. 20th, The quantity amounted to about 5 pints, and continued to increase daily. 26th, The strength of the mixture still farther augmented to, Ferr. vitriol ʒij. kali et myrrh a. ʒijs. tinct. scill. spt. æth. n. a. ʒiij. tinct. opii gt. lxx. aq. menth. ℥vj. M. From this time

time the discharge by the kidneys increased daily, till it amounted to 6 pints and upwards of high coloured water, emitting a strong fœtor, and depositing a heavy sediment. On July 10, his extremities were reduced to their natural size, the cough and expectoration almost wholly removed, the pain about the scrob. cord. much abated, and his strength and appetite greatly amended. On the 11th, he had several copious motions; diarrhœa being extremely prevalent among the patients for some time past, which compelled me to suspend the Chalybeate mixture, and to have recourse to the cretaceous as at first. In four days the diarrhœa was removed; and, on the 15th, he commenced the Chalybeate mixture, although every vestige of Dropsy was at this time wholly removed; but the diarrhœa had again reduced him. It is remarkable, that during the 13th, 14th, and 15th, he scarcely made a quart of water each day.

This man was accidentally seen on board the Pompée, and ordered to the Hospital by Dr. Harness, Commissioner of sick and wounded Seamen; a gentleman, the suavity and politeness of whose manners are only equalled by his humanity and professional abilities. From the marked appearance of hectic, joined to the anasarca, diarrhœa, and other bad symptoms attending this patient, the Doctor considered it a lost case.

CASE III.

Henry Roach, 26 years of age, a seaman belonging to his Majesty's ship Windsor Castle, was received into the Royal Hospital on the 1st of June, 1800. I found the abdomen enormously enlarged, fluctuation, dry tongue, unquenchable thirst, the lower extremities much tumified and œdematous, an unceasing cough, and he expectorated largely a purulent kind of mucus, if I may be permitted the expression, slightly tinged or streaked with blood; a fixed and distressing pain about the scorbicul. cordis, attended with profuse perspirations daily towards morning. The abdomen was so distended, and his strength so exhausted, that he could neither stand on his legs from the size and weight of his body, or lie down for fear of suffocation. He dated the commencement of his disorder from having put on a damp shirt the 24th of February last; from that time he had constant cough, which gradually increased till his belly began to swell, about five weeks before his admission. Whatever cathartics could do had been already liberally tried on board ship. His countenance had all the appearance of a completely formed hectic; the alæ of the nose were pinched in, the cheeks sunk and hollow, with a circular rouge-like tinge in the centre of each; in short, his whole appearance indicated approaching

approaching diſſolution, or, at beſt, incurable phthiſis; nor had I the ſmalleſt hope of his recovery. For the firſt three days I preſcribed only a pectoral mixture with tinct. opii camp. to eaſe the violence of the cough, expecting that he could not ſurvive many days. On the 4th of June, however, he began with the Chalybeate diuretic mixture, which was continued till the 8th without much variation; but he made on this day near a quart of water at different times. Increaſed the ferr. vitri. to gr. xxv. kali. myrrh a. ʒſs. tinc. ſcillæ. ſpt. æth. nit. a. ʒiiſs. tinc. op. gt. xl. aq. menth. ʒvj. m. ſum. cochlear iij. ʒis horis. Allowed a pint of red wine; no reſtrictions reſpecting the quantity of common drink, which was made by boiling ʒij. of crem. tart. for a few minutes in a quart of water with a little orange-peel, and ſweetened with honey. From this time to the 26th there was no alteration in the treatment, but the diſcharge by the kidneys increaſed to the aſtoniſhing quantity of between 8 and 9 pints of water daily, very high coloured, and depoſiting a copious ſediment; he began now to recover rapidly. Increaſed the ferr. vitr. to gr. xxx. kali myrrh a. ℈ij. tinc. ſcil. ſpt. æth. nit. aa. ʒiijſs. aq. menth. ʒvi. M. This quantity was daily perſevered in till the 13th of July, on which day he quitted the Hoſpital perfectly reſtored to health, all the ſymptoms having gradually diſappeared; even the cough and expectoration appeared wholly removed. There was a variety of ſmall occurrences reſpecting this and the preceding patient, which I have omitted, to avoid prolixity; but each had bliſters applied to the ſcrob. cord.

From the fortunate termination of theſe bad caſes, are we not juſtly entitled to conclude, that the above plan of cure will commonly prove ſucceſsful for the removal of Dropſy as a general diſeaſe, and even when combined with incipient phthiſis, or a morbid ſtate of the lungs? But where it depends on long eſtabliſhed ſcirrhus of the liver, or other viſcera, on polypi of the heart and great blood veſſels, on compreſſion from fixed and indolent tumours, or, in ſhort, when it is ſymptomatic only of ſome internal incurable malady; then, indeed, the probability of ſucceſs will be leſs apparent. I am,

GENTLEMEN,

Your obedient humble ſervant,

July 20, 1800. JAMES MAGENNIS, M. D.

Phyſician to the Royal Hoſpital, Plymouth.

To

To Dr. DYCE, Aberdeen.

DEAR SIR,

I Have obſerved in the courſe of my reading and practice, that Hydrocephalus Internus has always been attended with fatal conſequences. It is, therefore, in my opinion, the duty of every practitioner to contribute as much as is in his power to the elucidation of a diſeaſe ſo fatal to the human race. I ſubmit to your conſideration the following caſe, which lately came under my care, and which differs conſiderably from all others that I have yet met with; if you think that it deſerves a place in the Medical and Phyſical Journal, I beg leave to requeſt the favour of you to tranſmit it to the Conductors of that valuable publication.

About the end of May laſt, I was called to ſee a child about ſeven weeks old; I found him very emaciated and weak; his head much enlarged, and the ſutures conſiderably ſeparated. From theſe ſymptoms, I was led to conclude, that there was water in his head. His appearance and ſituation ſeemed to indicate that he could live only a few days; I therefore did not attempt any cure, but was induced to enquire particularly what ſtate he was in prior to my ſeeing him. I was informed, that he was a ſtout healthy child when he was a month old, and that his head had no uncommon appearance. He took ſevere fits of crying every afternoon for the four firſt weeks of his age, which was attributed to gripes: he generally made leſs water than is uſual for children at his time of life, and always foamed at the mouth when aſleep. In general, he reſted very ill; but ſlept better in the forenoon than at any other time. He had a good appetite; his food was flour bread and milk, but he vomited whenever he took bread and water: he was always regular and eaſy in his bowels. When a month old, he was ſeized with a fever, which laſted two weeks, and during its continuance, he cried almoſt day and night. At the commencement of the fever his head began to enlarge, the ſutures to be ſeparated, and he never afterwards retained the faculty of ſucking to ſuch a degree as formerly. From that time, his head had always a tendency to fall to the left ſide, and it could not be kept erect without a ſupport. — After he had recovered from the fever, an eruption appeared on his right ſhoulder, and on the left ſide of his breaſt, and began to ſpread by degrees over his body, his brows, and the back of his head. The matter diſcharged by the *ſores* had a ſaltiſh, diſagreeable ſmell, a watery appearance, and ſeemed to be of ſo infectious

infectious a nature, as to raiſe painful and ſimilar *ſores* on the arms and breaſt of his mother. He was eaſier, and he generally ſlept better, when the *ſores* or *puſtules* diſcharged much.

Thus, I have given as diſtinct an account of the ſymptoms of this extraordinary caſe, prior to the time I was called, as I could learn from the mother and the midwife.—I was ſent for to ſee him when he was about ſeven weeks old; at that time, his eyes were a little turned to the left ſide, and ſeemingly fixed in that ſituation; they were always open, even when he ſlept, yet, they were not more prominent than uſual; but the pupils were conſiderably dilated: light did not in any wiſe affect them. He was ſo acute in hearing, that the leaſt noiſe ſtartled or wakened him. His mouth was very large, and conſtantly open, except when he ſwallowed any thing. His tongue was ſhort, and far back in his mouth: he could never be ſaid to be altogether free from fever, for his pulſe continued ſo quick and irregular, that I could not number it. There was ſcarcely any alteration on him from the ſeventh to the tenth week of his age, except that he became weaker, and his head ſtill larger: he took his bread and milk as he uſed to do. About the end of the tenth week he began to be a little convulſed, on the left ſide in particular: his left arm was turned about in ſuch a manner, as that the palm of the hand was uppermoſt; and the joints of the leg and thigh on the ſame ſide, were ſometimes ſo ſtiff, that they could not be *moved*. There were ſpaſms over his whole body, which went off, and returned alternately. He remained in this ſtate till the thirteenth week; and after that, entirely loſt the faculty of ſucking; but his mother ſupplied that defect, by often milking her breaſts into his mouth. In this ſituation he lived five weeks, then death put a period to his miſerable exiſtence. Before he died he was much reduced, ſo ſtiff and cold, that, had it not been from his breathing, and attempting to cry, and ſometimes a writhing of his body, none could have believed that he was alive: It is ſcarcely poſſible to communicate any adequate idea of ſuch a wretched object. His head, when expoſed to the light, had almoſt, in every direction, a tranſparent appearance, ſuch as a lantern has when covered with oiled paper. During the whole courſe of the diſeaſe, he was perfectly regular in his bowels, and his ſtools were of the natural colour; but within a week of his death they became fœtid, and his belly hard; and a day or two before he died, he made more water than he uſed to do. He continued to take nearly his uſual quantity of food till the night of his death, and even that night, took two or three ſpoonsful of it. He always drank a great deal; ſlept little or none, but cried, or *fretted conſtantly*.

Having

Having obtained leave from his parents to open his head, I called in my neighbour, Dr. Napier, who had seen the child when alive, and likewise a young gentleman in the town, to see it performed. As I wished to preserve the water carefully, till measured, I drew it off with a trocar and canula: after I had drawn off all I could in that manner, I made a longitudinal incision in the direction of the sagittal suture, first through the skin and teguments, and next through the dura mater; and between the dura and pia mater, (where, no doubt, the whole of the water had been lodged) I found a little more, which I likewise took out. There were, in all, sixteen gills of water in the head, and as pure as if taken from a spring: the bones of the head were flexible, and so soft, that I could puncture them with a lancet almost in any place. At first sight the skull appeared like a shell, and not a vestige of brain to be seen, or at least, nothing but empty membranes; but on dissecting the whole of the membranes, and dividing the medulla oblongata, I found a part of the two posterior lobes remaining, which were of a solid membranous substance. The left lobe was a little thicker than the right, and of a greenish blue. When I cut into it, I found the inside almost of the same colour; the right had more of a grey colour. The thickest part of them did not exceed three-quarters of an inch, or an inch at most. Of the fore part of the brain, nothing remained but a shrivelled membrane. All the rest of the parts had their natural colour. When the membranes, and what remained of the brain, were dissected, and the vessels divided that supply the brain, &c. there was scarcely a drop of blood to be seen; and only about ʒj. or ʒij. of bloody water. Although the head had been separated from the body, and immersed for a considerable time in water, it could not be whiter, nor freer of blood than it was. I cannot conceive how the child could live so long, with his brain in such a state, and such a pressure of water upon it; perhaps, a much less quantity of water in the ventricles of the brain, would have proved fatal sooner.

Might not much crying, without a predisposition to the disease, be the exciting cause of hydrocephalus in children? Might not the frequent cleansing of the stomach and the bowels by *purges*, during the first three or four weeks of this child's age, have prevented or carried off the disease?

I am sorry that the shortness of the time allowed for the operation, did not permit me to investigate the brain with such exactness, as to be able to give you a more distinct account of it; but from what I have said, you can see that the case is a very remarkable one. When you have a leisure moment, I

ſhall hope to have the pleaſure of your opinion concerning it. I am, with much reſpect,

DEAR SIR,

Your's, &c.

Berwic, Oct. 20, 1799. T. GUTHRIE.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

AS the public attention is now much intereſted by Dr. Parry's valuable Treatiſe on Angina Pectoris, an account of a caſe of that diſeaſe, in ſome reſpects remarkable, may not be unacceptable to you. It occurred in the year 1797; but Angina Pectoris is ſo infrequent, that I have had no other opportunity of making trial of the medicine, which ſeemed, in this inſtance, highly beneficial; nor of determining, whether any credit be due to my conjectures on the nature of the diſeaſe. Still, it may not be without uſe, to relate a ſingle inſtance, in which this rare but fatal complaint was removed by means not employed before.

I believe I was not miſtaken, in thinking this caſe an inſtance of the diſeaſe, of which Dr. Heberden gave the firſt deſcription; but that may be determined, and the reaſon for the treatment I adopted may beſt be explained, by tranſcribing part of the notes which I wrote at the time.

Dec. 6, 1797. John Maynard, æt. 61, a carver in wood, was born in Berlin; has lived in London thirty-nine years, and enjoyed extraordinary good health till laſt winter. He is tall, well proportioned, thin, but pretty ſtout for his years, though a little bent forward, probably from ſtooping over his work. His anſwer to every queſtion, though a foreigner, was ſo diſtinct and preciſe, that I could not doubt the accuracy of the account he gave of his illneſs.

"Laſt March he became a patient at the Public Diſpenſary in Carey Street, London, having a cough, ſpitting of blood, and pain in his arms, near the inſertion of the deltoid muſcles, and down his fore arms, in the courſe of the muſculo-cutaneous nerves. He had been ill ſome time, but in about three months he was recovered; he left the Diſpenſary, and had no return of ſpitting of blood."

On the 6th of December he again became a patient at the Diſpenſary, and was committed to my care, by my friend Dr. Willan.

Willan.—"He has ſuffered much for about a month, from fits of "gaſping for breath,"* occaſioned by walking, efforts at ſtool, and bending forwards; but eſpecially by ſtooping to buckle his ſhoes; even very ſlight exertions, as croſſing his legs while ſitting, will bring them on. In theſe fits he has an inexpreſſible ſenſation of ſevere pinching at the pit of his ſtomach, extending upwards, and a gaſping for breath, which oblige him inſtantly to deſiſt from all exertion. On preſſing on the right ſide, below the ribs, near the ſcrobiculus cordis, he feels pain: this is the ſeat of his peculiar ſenſation.† He complains of pain in his loins, and in the iliac regions on bending his body. He has a conſtant cough, with very little expectoration. The peculiar ſenſations juſt deſcribed, have never ſeized him during a fit of coughing, but they have ſometimes followed that effort. He never has had the ſenſation of his heart ceaſing to beat; but on recovering from a fit, he feels it "flutter:"‡ It cannot be felt in any part of the thorax. Since theſe complaints began, he has had no pain in his arms."

"He finds his diſeaſe increaſing: he now is never a whole day without fits, and ſometimes has many in a day; they come on even when he is in bed, but are not more ſevere at night than in the day. He is habitually coſtive, having had a motion of the bowels only about once a week, for ſome years."

"His pulſe was ſlow, and very weak; but ſo little remarkable, that, having felt it for a ſhort time, I did not count it by my watch."

"He has no ſymptoms which indicate with certainty, an organic diſeaſe of the heart; though his age leaves little doubt that the arteries, and perhaps the valves of the heart, are not in their natural ſtate. If there be no other diſeaſe, it is probable that the elaſticity of the aorta is impaired; for this artery becomes leſs and leſs elaſtic, as old age advances. The valves at the origin of the aorta, in conſequence of this change, perform their office imperfectly;‖ ſome part of the blood returns into the heart, and the impulſe of the heart on the blood in circulation is diminiſhed."

"The

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* This is his own expreſſion. I never ſaw him during a paroxyſm.

† Dr. Heberden ſays, the pain always inclines more to the left ſide. See Med. Trans. Vol. II. p. 63.

‡ This word was uſed by the patient; but he did not mean to expreſs by it, a palpitation of the heart;—he never had palpitation of the heart.

‖ Theſe valves not being fully extended, the blood will be impeded in its entrance into the coronary arteries.

" The ſymptoms of true* Angina Pectoris, in which no change of ſtructure in the heart or its veſſels, is diſcovered in diſſection, may, perhaps, depend on defect of force in the heart. It is probable, that in ſome inſtances that organ becomes abſolutely weaker; as it has been found on diſſection, that the fibres had loſt their tenacity in an extraordinary degree: In other inſtances, the muſcles may not have loſt their vigour; but the obſtacles to be overcome may have been increaſed."

" Theſe conjectures reſpecting the nature of the diſeaſe, ſeem not improbable; for ſymptoms reſembling Angina Pectoris accompany ſome organic diſeaſes, in which the heart cannot communicate to the whole maſs of blood, an impulſe equal to that which it imparts in a ſound ſtate."

" In Maynard's caſe, I ſuſpect that the power of the heart is diminiſhed, as its motion cannot be felt, and the pulſe is very feeble; I therefore wiſh to try the effect of *argentum nitratum*, for that ſubſtance has a very remarkable influence both on the nerves and the muſcles, even when their communication with the brain is deſtroyed, and their ſupply of blood cut off; and it has been, in ſome inſtances, an effectual remedy in epilepſy, a convulſive diſeaſe ſubject to irregular paroxyſms.—In the year 1793, in making experiments with metals on the irritability of the muſcles, both of cold-blooded and warm-blooded animals, I found that the muſcles of a detached limb were rendered more vigorous;† and when they had ceaſed to be convulſed on the application of metals, they were reſtored to energy by touching a ſingle point of the nerve with *argentum nitratum*. In other experiments, I laid a frog, with its head cut off, and abdomen opened, upon a plate of zinc, and endeavoured to excite convulſions, by making a communication between the viſcera and the plate of zinc by a ſilver probe; but in vain, till I had touched the peritonæum with argentum nitratum. After this application, violent convulſions of the lower limbs were excited, by making a commu-

* This was written under the impreſſion, that the name Angina Pectoris had been applied, in ſome inſtances, to diſeaſes which did not correſpond with the diſeaſe to which Dr. Heberden gave that name, either in ſymptoms, or appearance on diſſection; but in other inſtances, though the ſymptoms were the ſame as thoſe deſcribed by Dr. Heberden, the appearance on diſſection was very different. He diſcovered no organic diſeaſe. See Med. Trans. Vol. III. p. 8.

† I uniformly found the very oppoſite effect from *kali purum*; and I in vain endeavoured to reſtore the energy of the muſcles, by the ſubſequent application of *argentum nitratum*, diluted *ſulphuric acid*, and *diſtilled vinegar*.

a communication again between the viſcera and the metals. Hence it appears, that argentum nitratum applied to a ſingle joint of the nervous ſyſtem, produces ſome change through the whole body of the animal; and that effect ſeems conducive to muſcular vigour."

"I was led by theſe facts, to preſcribe argentum nitratum to Maynard; for it is probable, that taken into the ſtomach, it muſt come in contact with a ſurface, not leſs furniſhed with nerves than the peritonæum. That ſubſtances taken into the ſtomach, produce effect through the medium of the nerves, cannot be doubted, ſince emetics* do not occaſion vomitting when the *par vagum* is divided."

"After what length of time the effect of argentum nitratum ceaſes, I do not know; I never made that an object of *attention* in my experiments; but, from accidental obſervation, I know that its influence is in a ſhort time diminiſhed, and within twenty-four hours has entirely ceaſed: though the ſame effect may again be produced, by again applying the *argentum nitratum* to the nerve. This I have found ſucceed each day for ten days, after the leg of a frog had been detached from the body, from which the head had been previouſly cut off."

"Maynard was ordered to take a quarter of a grain of argentum nitratum, three times a day. He was deſired to uſe aloetic pills, when neceſſary, to regulate the ſtate of his bowels.

"Dec. 8th. The patient ſtanding; his pulſe intermits often, and at unequal intervals: it beats at the rate of 68 in a minute. He is upon the whole, much better. The fits are not ſo eaſily excited, are not ſo frequent, and do not laſt ſo long. Let him continue the argentum nitratum."†

"Dec. 11th. The fits are leſs frequent, and leſs ſevere. His pulſe is about 69: It does not intermit; but, many times in a minute, a beat is perceived much leſs forcible than the reſt."

"Dec. 12th. His pulſe is 67: It does not intermit; but ſome beats are leſs forcible than the reſt: His bowels are regular. On the whole, he is much better."

"Dec. 15th. There is no alteration in his complaints, nor in his pulſe. He was not quite ſo well yeſterday; but he had been coſtive two days, and was relieved after an evacuation: He ſtill complains of pain a little above the left hip, when he bends forwards. He has not quite ſo much pain in his loins."

"Dec.

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* See Dr. Haighton's Exper. Med. Soc. Lond. Vol. II.

† This medicine was not omitted till his recovery was eſtabliſhed.

"Dec. 18th. He has been coſtive ſince the 15th. On the 17th, he had pain and fluttering of his heart; to-day he is better. His pulſe is 64; it does not intermit, but its force ſtill remits: He has more pain in his loins. Let him uſe the volatile liniment."

"Dec. 20th. His pulſe is 64, ſtrong, and without remiſſion. He had two fits yeſterday, not occaſioned by any great exertion: his bowels are regular. To-day he had a fit after he reached the Diſpenſary; he had walked more than half a mile. The pain in his loins ſeems moving downward: He had no pinching at the ſcrobiculus cordis, in the fits either of yeſterday or to-day; but he had "fluttering" and pain, beginning about the middle of the ſternum; it moved acroſs the left ſide: the gaſping for breath was not very urgent. Let him take argentum nitratum four times a day."

"Dec. 29th. His pulſe is 68, with one intermiſſion in a minute. He had a ſlight fit on going up ſtairs: He has much leſs pain."

"Jan. 8th. He has pain in his right ſide, and the calves of his legs: the pain is nearly removed from his left hip. He has had no fit ſince the laſt report: His bowels are at preſent coſtive: His pulſe is 64, regular and ſtronger. He looks much better, and fatter in the face."

"Jan. 15th. He is much better; he had a fit on the 13th. His pulſe is 64, and regular."

"Jan. 19th. He has had no fit ſince the 13th: His pulſe is 61, and regular. Let him continue the argentum nitratum; and take a ſcruple of Peruvian bark three times a day."

"Jan. 24th. His pulſe is 69, regular, and firmer, but not full. He has leſs pain in his back: the bark keeps his bowels open. Let the medicines be continued."

"Feb. 9th. He is much better. After this time he had very few, and thoſe only ſlight returns of fits. His urine was never copious."

About the middle of February I left London; but I often heard of Maynard; and in October, 1797, I heard that he had continued free from his former complaints, and was pretty well; but was obliged, occaſionally, to take aloetic pills.

I have tranſcribed each day's report, to ſhew the progreſs of the caſe. The remiſſion of the ſymptoms from the time when he began to take argentum nitratum, though the diſeaſe was daily growing worſe, leaves no doubt that the recovery ſhould be attributed to this medicine: It produced no ſenſible effect; it did not even keep the bowels regular, though I have ſometimes found it occaſion diarrhœa. That is the only effect I ever

ever obſerved from argentum nitratum in many different diſorders, in ſome of which it proved a ſucceſsful remedy.

I have ſtated my conjectures on the nature of the diſeaſe, as they occurred; and I think them corroborated by the facts that Dr. Parry has lately publiſhed. He relates, that in ſeveral inſtances of Angina Pectoris, the coronary arteries, the veſſels that carry the blood for the ſupport of the heart, were oſſified; and in ſome inſtances, their capacity was diminiſhed by a membranous tube, formed within them.* Theſe, or any diſeaſes, which may diminiſh the quantity of arterial blood diſtributed through the heart, will probably impair the muſcular force of that organ; for all other muſcles loſe their power when the ſupply of arterial blood is diminiſhed.

Fourcroy, with ſome of his aſſociates in the Academy of Sciences, proved by accurate experiments, that the quantity of oxygen abſorbed in reſpiration, is increaſed in proportion to the increaſe of muſcular exertion: the frequency of the pulſe is alſo increaſed. And Anatomiſts obſerve, that the quantity of blood diſtributed through muſcles, is in proportion to the exertions to which the muſcles have been accuſtomed. The colour is higher, and the blood veſſels are larger, in thoſe muſcles which have been accuſtomed to much exertion, than in correſponding muſcles in other bodies, which have been leſs exerted. From theſe facts, it is evident, that the blood veſſels do not contain more arterialized blood, than the muſcles require for ordinary exertions; and therefore, when the quantity is diminiſhed, the muſcles muſt be unequal to their higher exertions. The heart, therefore, when its coronary veſſels are diſeaſed, will not be able to propel the blood when returned upon it in greater quantity, from exertions of the body, or affections of the mind; nor when the obſtacles to the motion of the blood are increaſed by the poſture of the body.

From the ſymptoms of Angina Pectoris, and from diſſection, it ſeems probable, that this diſeaſe ariſes from a defect of force of the heart, either abſolute or relative.

The blood, in conſequence of ſuch diſeaſe in the heart, is leſs quickly ſubmitted to the influence of the air in the lungs; hence follows a ſenſe of ſuffocation, which gives riſe to more frequent efforts of breathing, to gaſping, and deep ſighs. And the heart perhaps, from the diſproportioned effort, may

* See Inquiry into the Symptoms and Cauſes of Syncope Anginoſa, p. 4, 12, 24, 33.

may be seized with cramp, as other muscles are seized with cramp in great, and especially in protracted, efforts.

The case I have related, leads to many other observations; but I have intruded too far on your Journal, to add more than that I am,

GENTLEMEN,

With great respect, your obedient servant,

York, Feb. 20, 1800. ROBERT CAPPE.

P. S. These notes were sent to a friend in London, in whose judgment I have great confidence, with a request that he would transmit them to the Editors of the Medical and Physical Journal, if he thought they might be worthy of their attention. My friend expressed a doubt, whether the case was really Angina Pectoris, and suggested a change of title for the paper. I should acquiesce in his judgment, and adopt the change, if the case had not been considered by some friends who saw it, as Angina Pectoris; and the notes, marked with inverted commas, had not been written at the time on this supposition. I have, therefore, to request of you, gentlemen, to accept them, such as they are; and I am not without hope, that the case, which strongly resembles Angina Pectoris, may not be found uninteresting by those who would assign it some other name.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE appearances after death observed in the following case, are, I think, worthy of being preserved in your valuable publication, particularly as nothing similar is to be found in the writings of De Haen, Morgagni, or Doctor Baillie. I shall barely enumerate such particulars of the case, as may serve to shew how easily the cause and seat of the disease might be misconceived.

Richard Montjoy, aged 8 years, a thin, sprightly boy, of a fair complexion, with blue eyes, delicate skin, and fair hair, was attacked, in the month of June of the year 1796, with a severe pain under the stomach. As most of the diseases of children, in this as well as in other countries, are ascribed to worms, some *worm-powders* were procured from an apothecary in this city, which operated strongly. No mitigation of the pain

pain having however enſued, I was ſent for, and found the boy apparently in great agony; he complained of excruciating and unremitting pain about the lower part of the ſtomach, ſhooting acroſs the abdomen; his countenance was pale and languid, and his pulſe feeble. The pain was neither increaſed nor diminiſhed on preſſure; and as the bowels were free, there was no reaſon to ſuſpect an inflammation of any part of the inteſtinal canal. Different means were tried, with a view of giving temporary eaſe, but no material relief was experienced from any, except from laudanum in pretty large doſes; he continued ſeveral weeks in this ſtate, taking very little nouriſhment, and complaining of conſtant pain.

On being queſtioned relative to the cauſe of his complaint, he could aſſign none, but recollected having received a ſevere blow of a rattan acroſs the loins from his ſchool-maſter. About the commencement of the following winter, after he had renounced the aid of medicine as fruitleſs, his health began ſuddenly to mend, and he experienced temporary ceſſation of pain. Thoſe ſymptoms became gradually more favourable, until he at length entirely recovered.

From the winter of 1796 until the month of Auguſt 1799, he continued in perfect health. About the end of this month the pain about the ſtomach returned, without any apparent cauſe, and preciſely in the ſame ſituation as before; it was ſlight at firſt, but increaſed daily: His appetite was at firſt very bad, but afterwards became voracious; on taking food, however, the pain was much aggravated, but he felt relief from bending his body forwards. He was often attacked with diarrhœa, of the appearance of blood and pus; at other times the bowels were conſtipated. He was bliſtered, and took a variety of medicines, without any benefit.

Though during the three or four laſt months of his illneſs he took a conſiderable quantity of nouriſhment, he viſibly became more emaciated and feeble. His pulſe was, during this time, about 120. His countenance reſembled that of a perſon in the laſt ſtage of a pulmonary conſumption; it was pale, and the hectic flush was diſtinctly marked on each cheek: he had conſtant, profuſe, and univerſal perſpiration; the abſence of cough, however, during his whole illneſs, together with the ſeat of the pain, left me no room to doubt that the lungs were not the ſeat of the diſeaſe.

About three months after the firſt attack, the pain became gradually milder, and his appetite returned; he was, however, ſtill much emaciated, and never totally free from pain. He was bliſtered, and took mercury until the mouth was affected, without any advantage.

He ſpoke of the torments he endured rather in a plaintive than a querulous tone; he bore them, indeed, with a greater degree of reſignation than could be expected at his age. He ſeemed ſtrongly impreſſed with the idea that he would never recover, and frequently told his parents that he knew full well they could form no idea of the degree of his ſufferings.

About the middle of laſt May he expired; a few hours before his death he had eaten ſome veal for dinner.

His parents were anxious that the body ſhould be opened, in order that, if poſſible, the cauſe of his diſeaſe might be diſcovered. I conſequently called on Dr. Bullen, Dr. F. Walſh, and Dr. John Milner Barry, of this city, for that purpoſe.

After making a conical inciſion, and expoſing to view the viſcera of the abdomen, their appearance was quite natural; no omentum could however be obſerved, as it probably had been waſted away during his tedious illneſs: The liver appeared rather prominent, but quite ſound; the ſpleen and ſtomach exhibited no marks of diſeaſe; the inteſtines appeared natural, and no worms were found in their cavity; the meſenteric glands were very little enlarged.

On raiſing up the liver, immediately under it appeared a large, oblong tumour, which at the firſt view appeared to be a conſiderable enlargement of that portion of the colon, which after aſcending above the anterior part of the right kidney, paſſes under the liver and gall-bladder. On tracing, however, the inteſtines from the pylorus to the rectum, the canal was found quite natural, both with reſpect to diameter and appearance. On minute inveſtigation, we found this tumour attached to the right kidney, and extending from it to the diaphragm, to which it adhered by cellular ſubſtance. Having carefully diſſected it out of the abdomen, we ſeparated the kidney, which did not exhibit the leaſt appearance of diſeaſe. The tumour was of an oblong ſhape, about ſix inches long, and from two and a half to three in its largeſt diameter; it was of the ſame colour with the inteſtines externally; it was of a firm conſiſtence, and on cutting into it, we found it compoſed of a yellowiſh-coloured ſubſtance, with a ſhade of brown, not unlike the remains of beef-ſuet, after it has been melted and the tallow ſqueezed out of it. After being ſeparated from the kidney, it weighed 2 ¾ lb. We had now no heſitation in pronouncing this tumour to be a conſiderable enlargement of the *capsula renalis*.

On raiſing up the ſtomach and ſpleen, a ſimilar tumour was perceived on the left ſide, which on examination was found to be the *capsula renalis* of that ſide alſo conſiderably enlarged; it reſembled in appearance that of the right ſide, but was much more

more firmly connected with the diaphragm. On one of its surfaces the pancreas was found firmly attached to it, and was thus removed from its transverse situation in the abdomen, by which it is parallel to the stomach, to form an acute angle with that organ. The pancreas was not in the least enlarged, nor scirrhous, as there was some reason to expect. As so firm an adhesion between it and the tumour must have been the consequence of inflammation, to this may be referred the acute pain felt at the commencement of the disease. The capsula renalis of the left side, together with the kidney, which was of the natural size, weighed 3 ½ lb.

On opening the thorax, the lungs were found quite sound, and no marks of scrophula could be discovered.

CHARLES SUGRUE, M. D.

Corke, June 26, 1800.

To the Editors of the Medical and Physical Journal.

——— Exempta juvat spinis e pluribus una. HOR.

GENTLEMEN,

ON perusing the Observations of Mr. DAVID UWINS, in NO. XVI. of your truly valuable Miscellany, I was prompted to enlarge on the paper you honoured me by inserting in the preceding number; but my professional avocations prevented the execution of my intention during the course of the last two months. Leisure now permits me to make a few cursory remarks, which, should you indulge with a place in your Journal, will be thankfully esteemed by me, as an additional favour to those already conferred by your attention.

That gentleman observes, that "he suffered a degree of disappointment in finding no additional matter to what had been before advanced on the subject, excepting the publication of a few cases, which were by no means necessary to strengthen the evidence against all kinds of nostrums and specifics." I cannot, in the first instance, readily conceive the cause of that gentleman's disappointment. He acknowledges, that he observed in the table of contents, a paper "On the pernicious Effects of Quackery." I believe that paper, on perusal, he found correspond with its title. Had the table announced a communication *on the most effectual means of exterminating Quackery*, such an event would have been natural. He proceeds to assert, that those Observations were unnecessary. In

this alſo I cannot acquieſce. Mr. U. previouſly obſerves, that "the ſubject had been for ſome time in a ſtate of dormancy." It follows, therefore, that I was juſtifiable in the attempt at its reſuſcitation. It appears, its revival was neceſſary to call forth the latent opinions of this gentleman on the ſubject, (which were certainly ingenious and judicious). I am, however, inclined to proſecute further a matter of ſo much importance, and probably in a more explanatory manner. I do not, as inſinuated, preſume to aſſert, that a "neglect of legiſlative interference is the baſis of the evil in queſtion: By no means. When I hinted that ſuch an interference was neceſſary, I did not conceive it probable that it could be exerted towards its total ſuppreſſion; whilſt the revenue is benefitted by the advantages accruing from the permiſſion of patent medicines, ſuch an event is ſcarcely to be hoped for. My plan, I flatter myſelf, is not ſo chimerical; its utility I ſubmit to your ſuperior judgment. For mine own part, I do not conceive a total ſubjugation of theſe vaunting empirics neceſſary. If I can contribute to the ſecurity of the welfare of my countrymen, my aim is accompliſhed. — I would have a law enacted, that if any perſon has a recipe for which he wiſhes to procure a patent, (whether his own invention or communicated to him by others) the noſtrum ſhould be firſt of all ſubmitted to the inſpection and analyzation of a committee of profeſſional men, eſtabliſhed for that purpoſe. If, after duly inveſtigating its component parts, they ſhould be of opinion that its adminiſtration would be ſerviceable in any particular complaint, to ſuch diſeaſe alone ſhould it be appropriated; and if, thus authorized, he obtain a patent, he ſhould incur a heavy fine, ſhould he at any time advertize the ſame noſtrum as a remedy in any other diſorder. By theſe means, although from political motives an evil is tolerated, it will be diſarmed of its power to do miſchief.

Mr. CUSTANCE obſerves, (in NO. XVII.) that caſes deſigned to evince the dangerous effects of Quackery to its deluded followers, ſhould be communicated to the public through the ſame channel as the doctors' advertiſements. He will permit me here to diſagree with him. So marked an attention to the machinations of theſe worthleſs miſcreants, would be too great a condeſcenſion on the part of the Faculty, and would ultimately conduce to their advantage; for theſe wily peſts would find little difficulty in perſuading their credulous victims, that the ſuper-eminence of their characters, and the aſtoniſhing efficacy of their medicines, had attracted the envy of the profeſſion, who were obliged to adopt that method to depreciate its value. Theſe inſinuations would be readily ſwallowed by ſuch perſons as are uſually operated on by advertiſements of that nature.

Thus,

Thus, in attempting to leſſen their credit, we ſhould, on the contrary, ſtrengthen their power, and furniſh them with materials to purſue their deſtructive career.

I ſhall not proſecute this ſubject further at preſent, but hope that thoſe gentlemen who have already given their opinions on the ſubject will with freedom reject, improve, or enlarge on the plan I have hinted thus lightly, or ſuggeſt other means more prudent or practicable.

I am induced from lately obſerving the frequent diſputes among ſeveral of your correſpondents, reſpecting the extraction of the placenta, (without hazarding an opinion myſelf) to ſtate two caſes which occurred to me not long ſince.

On Sunday, April 20, I was called to Elizabeth Baker, of Weſtwood, a ſmall village near this town, to attend in delivery. When I arrived, I found her ſtanding with her back reſting againſt the wall; and learned from the attendant women, on enquiry, that ſhe had been in this erect poſition for ſome hours. Not being able to ſit or even lie down, without the greateſt inconvenience, I concluded at the moment, from this information, that delivery was very near; I therefore placed her gently on the bed, and proceeded to examination. On attempting to introduce my fingers, I felt ſome reſiſtance; and examining further, I found that the uterus and its contents were ſo far preſſed into the vagina, that ſome part protruded a little through the os externum; a pain which immediately followed, would have forcibly expelled it, had not I made a conſiderable reſiſtance with my hand. The os tincæ not being dilated to the compaſs of a ſhilling, I was convinced that delivery was for the preſent impracticable; I therefore attempted to return the uterus, and happily ſucceeded; and a copious evacuation of urine ſhortly ſupervened, which diſcharge had been ſuppreſſed nearly two days by the preſſure on the meatus urinarius. I directed that ſhe might be conſtantly kept in a horizontal poſition, and the bowels moderately open by occaſional emollient clyſters, an anodyne being now and then introduced. She thus continued a week without a recurrence of pain, prolapſe of the uterus, or impediment in the alvine or urinary evacuations.

On Monday the 28th, I was again called, about one o'clock in the morning. On arriving, I found the child had been delivered without aſſiſtance, about three-quarters of an hour; that conſiderable hæmorrhage had enſued, but had then ceaſed; and the placenta was not yet extracted. The woman being extremely weak, and conſiderably exhauſted by the effuſion of blood, I thought proper, as the hæmorrhage had ſubſided, to wait

wait ſome time before I attempted its extraction: But ſome ſlight pains occurring, (which I hoped would effect its expulſion without difficulty) I made ſome efforts to bring it away, by gently drawing the funis; but in vain. On introducing my hand, I found a morbid adheſion had taken place near the fundus uteri. As the uterus had not much contracted, I deſiſted from further endeavours, conſidering the weakneſs of the patient, whoſe ſituation was rather perilous from recent exhauſtion; her lips livid, pulſe ſmall, and her whole countenance pale and ghaſtly. I determined to leave its expulſion to the efforts of Nature, and waited with patience about four hours, contenting myſelf with gently ſtraining the funis at the recurrence of every pain. By this time the patient became very importunate in her requeſt to have it taken away at all events, being extremely anxious to be put into bed; I therefore, in compliance, again introduced my hand, and removed ſeveral large clots of blood which obſtructed its paſſage; then cautiouſly introducing my fingers round the whole ſubſtance of the placenta, between it and the uterus, I gradually detached and brought it away entire. Slight hæmorrhage ſucceeded, and repeated faintings, which were ſo alarming that I began to wiſh I had perſiſted in my original reſolution of truſting the operation to the efforts of Nature, which I doubt not would have been ſufficient, had I not acceded to her impatience. By adminiſtering cordial, tonic, and volatile draughts frequently, ſhe ſoon recovered, and was, in the courſe of a fortnight, able to leave her room without material injury or inconvenience.

The ſecond caſe is of Elizabeth Munday, reſiding at Avonclift, near this town. I was called on to attend her in labour, May 16. The preſentation of the child was natural, and nothing material occurred prior to delivery, which happened ſoon after my arrival. I did not intend to proceed to the extraction of the placenta until Nature evinced by her efforts for its expulſion, that my aſſiſtance was neceſſary. But about ten minutes after the birth of the child, a hæmorrhage enſued, which in a ſhort time became ſo profuſe as to greatly endanger the life of my patient. I then judged it expedient to attempt its delivery without further delay. I took hold of the funis, which was of a texture uncommonly ſlight, and drew it in the gentleſt manner; but unfortunately, notwithſtanding I proceeded with the utmoſt caution, it ſeparated at the placenta. Although ſuch an accident was new to me, I did not ſuffer alarm to conquer my circumſpection. I cautiouſly introduced my hand into the uterus; and, as in the preceding caſe, gradually detached the placenta, which I brought away entire. Hæmorrhage ſtill continued, and I became extremely apprehenſive for my patient's

tient's safety; but happily, by the application of wet cloths, &c. and supporting her occasionally with cordials, I succeeded in removing every alarming symptom, and she is now tolerably strong and healthy.

The former of these cases may tend to exemplify, that the placenta may be retained with safety a much longer time than is generally admitted; and the latter, that although a forcible extraction is sometimes necessary from accident, it may be easily effected without the necessity of thrusting the fingers into the substance of the placenta.

Before I conclude, I shall further intrude on your patience by calling your attention to another subject. In the first Vol. of your Miscellany, p. 181, Professor Hufeland, of Jena, recommends the use of artificial musk in the hooping cough. I have made several essays of the virtues of that composition, and find it efficacious not only in that complaint but in several others, a few of which I shall briefly state to you. I generally administer it in the form of a tincture, thus prepared: Two drachms of the resinous extract, obtained by the process there recommended, I dissolved in eight ounces of alcohol, which formed a tincture of a pale yellow colour, and afforded a very grateful smell. Two sons of a gentleman at Bristol, the one about nine years of age, and the other six, were afflicted with the hooping cough. In the eldest, an epistaxis constantly attended the paroxysms of coughing, accompanied with severe pains in the region of the thorax. The disorder in both seemed to resist the power of the remedies used. Emetics, &c. were administered by a medical gentleman there resident, but without any visible good effect. Having business that called me to that city, I accidentally saw the children, and advised their friends to make trial of this specific, which they agreed to. I sent a phial, containing about ℥jss, directing the eldest to take twelve and the youngest ten drops of the tincture three times a day, in a tea-cup full of barley-water. I have, a few days since, received an account of its good effects, in a letter from my friend, a short extract from which I shall here transcribe. "The bottle of drops you sent me for John, has perfectly cured him of the hooping cough; on taking it, he immediately found relief, as it removed the pains he complained of about his chest, and stopped the bleeding of his nose. These drops, without the aid of any other medicine, have perfectly restored him. The youngest is also nearly recovered."—— In two or three other instances I have also witnessed its good effects; and am of opinion, that in this complaint its efficacy stands unrivalled.

In

In a case of Diabetes Mellitus, its administration was attended with singular advantage. It occurred in an elderly man, who resides at Broughton, near Melksham, in this county.—The concomitant symptoms sufficiently characterised the disease: Great emaciation, loss of strength and appetite, with a slight degree of hectic. The discharge of urine was very considerable, and varying in its appearance, sometimes assuming that of whey, at other times (except when held in a glass to the light) perfectly limpid; the taste and smell were such as are commonly distinguishable in that disorder. I gave him a considerable quantity of hepatised ammonia, recommended alkaline drinks, and a total abstinence from vegetable food and fermented liquors. The disease did not, however, seem disposed to yield to this mode of treatment; on the contrary, the symptoms became daily more formidable. Considering his case hopeless, and, I confess, with no very sanguine expectations of success, I determined on a trial of the tincture before described. I directed him to take 25 drops bis terve die, persisting in the same regimen I before advised, and omitting the hepatised ammonia. I was agreeably surprised by his speedy amendment, and at length his complete recovery. From the time he commenced taking the drops, the alarming symptoms gradually subsided, his appetite returned, his strength became by degrees repaired, the urinary evacuations became less frequent, never involuntary, divested of its saccharine taste and peculiar smell, and its appearance healthy; in fine, he soon found himself in a state of complete convalescence. I have found it a powerful tonic and corroborant in nervous disorders, and cases of extreme debility; several of which, would time permit, I could now lay before you. This, however, I must defer till a future opportunity; I fear I have already trespassed too long on your patience, for which I solicit your excuse. Accept my warmest wishes for the prosperity of your excellent and laudable undertaking; and believe me to be, with respect,

GENTLEMEN,

Your most obedient servant,

Bradford, Aug. 9, 1800. O. W. BARTLEY, Surgeon.

DR.

Dr. MACLEAN, on DIGITALIS.

[Continued from pp. 127—141 of our laſt.]

My ſtrongeſt and moſt vigorous plants grow in a bed or bank ſloping to the ſouth, at the diſtance of ſeveral feet from each other, in an oval, raiſed about a foot and a half above the level of the ſurrounding ground. This was a piece of ground originally detached from the kitchen garden, and raiſed about two feet above its level, (whether by nature or art I know not,) allotted for the growth of ornamental flowers and ſhrubs. The ſoil was naturally light and dry, and it was rendered ſtill more ſo by the addition of a portion of coarſe gravel. But on obſerving the objections urged againſt Horticulture as a general principle, I was deſirous of aſcertaining how far they might be well founded. With this view I directed my gardener, laſt autumn, to tranſplant about 100 plants into the rich ſoil of the kitchen garden, and to add a quantity of gravel ſufficient to looſen its texture. They furniſhed me this ſummer with an abundant crop of leaves, equally ſtrong, healthy, and vigorous, with any I had gathered, although the higheſt ſtems did not exceed four feet. The principal circumſtances I find neceſſary to its ſucceſsful culture in a garden, are, a light dry ſoil, and a ſituation freely expoſed to the ſun and air. The roots of the Fox-glove are extremely ſmall and numerous, and ſeem incapable of penetrating through a denſe ſoil.

The Doctor endeavours to impreſs the belief, however, that he has the authority of eminent botanical writers, from the fifteenth century to the preſent day, in his favour. After repeating his favourite epithets, "low and *damp* ſoil, or a *chalky* ſoil, or a *fat* and *rich* ſoil," which he tells me, "if I conſult the writers upon the natural hiſtory of the plant, will diſcover, are highly detrimental to its growth;" as if I had inſiſted upon theſe being abſolutely neceſſary to it; he obſerves, "that Dr. M. in inſiſting on free expoſure to the air, &c. is in another inſtance deviating widely from the known habitudes of the wild plant;—that botanical writers would inform him, that ſheltered ground is the favourite ſituation of the Digitalis, which courts ſhade, is *always* found in deep hedge-rows," &c. "That I may not be taxed, however, with general or unauthoriſed aſſertion," continues he, "I ſhall conclude theſe remarks by quoting ſome of the firſt, both old and modern writers, on the natural hiſtory of the plant."

"Naſcitur in *montibus*, *umbroſis* et *ſaxoſis* locis. Fuſchius."

"Fox-glove groweth in *barren*, *ſandy* grounds, and under hedges. Gerard."

" It grows only in *gravelly* ſoils, *rarely* or *never* on thoſe where there are *ſtrata* of *calcarious* earths. Lewis."

" Digitalis. Place; *dry*, *gravelly*, or *ſandy* ſoils;" *particularly on ſloping ground.** " Withering."

Now I muſt take the liberty of telling the Doctor, that none of theſe authors, nor any that have fallen within my reach, appear to me to have advanced any thing tending to eſtabliſh what he has aſſerted.

If Fuſchius ſays, " Naſcitur in *umbroſis*," he likewiſe adds, " *montibus* et *ſaxoſis locis.*"

If Gerard tells us, " it groweth under *hedges*," he alſo mentions, " in *barren*, *ſandy* grounds;" Lewes and Withering ſay nothing of *ſhade*; and the ſoils and ſituations deſcribed by them, as friendly to its growth, are in general, the reverſe of *ſhaded*, dry, and gravelly ſoils; and ſloping ground, being, I believe, either elevated or expoſed. I can diſcover nothing like, " *always found in deep hedge-rows.*"

If in hedge-rows, on the ſides of banks, and *particularly on ſloping ground*, the Digitalis be ſhaded on one ſide from the ſun, it receives his perpendicular rays on the other; if it be ſheltered on one hand from certain winds, it will be fully expoſed on the other.

It appears evident, therefore, that in regard to ſhade, even from the authorities he has himſelf cited, the balance is conſiderably againſt him.

Nor does he ſeem more fortunate in adducing their teſtimony, as adverſe to its culture in a garden. Like all other botanical writers on the natural hiſtory of plants, they ſpecify the ſoils, ſituations, and habits congenial to them; but does it thence follow that they meant to deny them a place in the garden? If this were the caſe, many hundreds of plants now in high cultivation in gardens, muſt neceſſarily be excluded. The ſoils mentioned by theſe reſpectable authors, may as readily be imitated in the generality of other gardens, as they have been in mine, as far at leaſt as they may be thought neceſſary. In ſpeaking of the common garden Digitalis, it appears to me, that Dr. D. judges of its virtues entirely from its external appearance, without having put them to the teſt of experiment; a mode of inveſtigating truth which muſt often lead to error. There is an obvious difference in the ſize and heighth of theſe and the wild plants; yet not ſo great a variation in their internal qualities. I have had frequent opportunity of making a compariſon, not only between the leaves of two pariſhes

* Why Dr. Drake ſhould have omitted this part of Withering's hiſtory, is beſt known to himſelf.

riſhes contiguous to that in which the Doctor and his friends loaded their cart, but thoſe of ſeveral gardens, in which no attention was paid to the culture of the plant, more eſpecially thoſe of the late Mr. Downes, ſurgeon, of this place, on which my firſt trials were made; of Mrs. Young, and S. Briſe, Eſq. both of Clare; (Dr. D. obliges me to mention names and places.) The firſt was not inferior to any I have ever uſed; and an epileptic boy ſeemed as readily affected by the tincture made from thoſe of the latter, as by any other; nor did the medical men among whom it was diſtributed, complain of its want of power. The trials, however, were not ſufficiently numerous, nor made with that preciſion and accuracy neceſſary to form a correct judgement of their relative ſtrength. One thing, however, I will venture to affirm, that the common garden Digitalis is much more to be relied on than that which is indiſcriminately gathered, and in general found in the ſhops.

I wiſh it to be underſtood, that I have entered on this diſcuſſion concerning the culture of the plant, ſolely with the view of ſhewing the weakneſs and the fallacy of the arguments adduced againſt it; for if the authors quoted by Dr. D. and all who have writen on its natural hiſtory, had poſitively affirmed that it would not thrive in a garden, I ſhould feel myſelf under the painful neceſſity of contradicting them.

It gives me pleaſure to obſerve, that from the attention now paid to its preparation and culture, the medical world are likely to be in poſſeſſion of the genuine leaves, which alone can enſure ſucceſs; for no plant with which I am acquainted, requires more care in the preparation, or attention in the exhibition, than the Digitalis; yet it ſhould be added, that none rewards the practitioner more for his pains.

In the analyſis of my remarks, Dr. D. thus proceeds: "The inferences which I have drawn from ſome well-known facts in Phyſiology, and to which I am indebted for the uſe of the Digitalis in conſumption, appear to me to have been miſunderſtood by Dr. M. and to have been objected to on inſufficient grounds. In the preſent ſtate of medical ſcience, no one who has duly cultivated it, and who wiſhes to diſtinguiſh his practice from empiriciſm, can or ought to exhibit a new and powerful agent without founding ſuch exhibition on the deductions of ſcience and analogy." And farther,

"*There are ſome modern practitioners, obſerves Dr. Darwin, who declaim againſt medical theories in general, not conſidering that to think is to theorize; and that no one can direct a method of cure without thinking, that is, without theorizing: and happy, therefore, is the patient, whoſe phyſician poſſeſſes the beſt theory.*"

"Impreſſed with the truth of this obſervation, I ſhall attempt

to prove, and it will be no difficult taſk I think, that what has been termed 'a *theory totally inadmiſſible*,' is but, in ſhort, a ſtatement of facts, drawn from broad experience, and that the only part which merits the appellation of theory, is a mere analogical deduction ariſing from theſe facts. In order to render this more clear, I ſhall ſtate, in numerical order, the different data. 1ſt. Pus is a ſecreted fluid, the conſequence of certain diſeaſed motions of the extremities of the blood veſſels. 2. Hectic fever ariſes only from the matter of an open ulcer. 3. What is termed laudable pus when ſecluded from the air, is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it reſts. 4. When pus is excluded from atmoſpheric air, it rapidly attracts oxygen, and an acid of a peculiar kind is generated. 5. Hectic fever is the effect of the abſorption of aerated matter." (Ib. vol. ii. p. 422.) He then proceeds to ſtate the grounds on which theſe data are founded; "and ſhould it be made to appear," ſays he, "that there is juſt grounds for thinking theſe affirmations to be matters of fact, no one will probably deny that the curative proceſſes are legitimately deduced." (Ib. p. 423.)

That I may have unfortunately miſunderſtood the Doctor, "and objected on inſufficient grounds to what he terms, 'well known facts,' is not improbable. Different minds, and ſometimes happily for mankind, form different conceptions of the ſame things and objects. But whether I have done this, "without thinking, that is, without theorizing," is not for me to determine. If I may be allowed this privilege, I own they never ſtruck, nor do they now ſtrike my mind, as laying any claim to the dignified appellation of *facts*, but to be mere phantoms, not of *his*, but chiefly of Dr. Darwin's imagination; which, when we attempt to aſcertain their reality, elude our graſp, and vaniſh like a ſhadow. If this ſhould be proved therefore, it is not likely I ſhould admit, "that the curative proceſſes are legitimately deduced."

As I purpoſe, on a future occaſion, to take a comprehenſive view of this hypotheſis, (which I ſhall ſtill continue to term, "a theory totally inadmiſſible) I ſhall at preſent only offer a few remarks, and contraſt theſe data with what appear to me to approach nearer to facts.

1ſt datum. Pus is a ſecreted fluid, the conſequence of certain *healthy actions** of the extremities of the veſſels which ſecrete it.

2. The

* The learned phyſiologiſt may, at firſt ſight, be ſurpriſed at the term *healthy* being applied to veſſels in a highly morbid or inflamed ſtate. In an Eſſay

2. The matter of an open ulcer is *not* neceſſary to the production of hectic fever.*

3. What is termed laudable pus, either when *secluded from* or *exposed to* the air, is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it reſts.

4. Although the truth of this datum may be queſtioned, at leaſt when applied to good, thick, bland pus, as found on the ſurface of a healthy wound or ulcer, I ſhall, at preſent, only object to the inference deduced from it; and ſay that,

5. Hectic fever is *never* the conſequence of the abſorption of healthy pus; and it might be added, either in its ſimple or *aerated* ſtate.

The proofs in ſupport of theſe data ſhall be given hereafter, when this ſubject is entered upon more in detail.

Were I to comment upon the above edifying tranſcript from the

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Eſſay I have had for ſome years, in manuſcript, on Inflammation, nearly ready for the preſs, but which has been ſubjected only to the inſpection of a few medical friends who have intreated its publication, are words to the following effect, which, as applicable to the preſent ſubject, I ſhall tranſcribe: "There are two ſtates or conditions of veſſels in inflammation unfavorable for the ſecretion of good pus; the one *exceſſive*, the other *defective* excitement, which may be termed *morbid* actions. The interference of art will be neceſſary in the one, to abſtract ſtimulus and tone; in the other, to add both, in order to bring the veſſels to the intermediate ſtate, between theſe two extremes, which alone is friendly to the formation of good bland matter. This happy medium I call *healthy*, becauſe it is immediately connected with, and abſolutely neceſſary to, a *healthy* or healing proceſs." A few examples in illuſtration of this are afterwards given, which ſhall, at preſent, be omitted.

This ſtate correſponds with what Mr. Hunter termed *healthy* inflammation.

It really appears as inconſiſtent with the known laws of the animal œconomy, as it is with the rules of ſound logic, to call that action *diſeaſed*, which it is the endeavour of every good ſurgeon to eſtabliſh, from a conviction that without it he will attempt in vain to bring about the healing proceſs.

* Dr. D. ſeems rather unlucky in adducing Dr. Cullen's teſtimony in ſupport of this *datum*, as laid down by him. Even from the paſſage he quotes from his inimitable works, it does not ſeem clear that the words, "*purulency* or *ulceration* of ſome *internal* or *external* part," are neceſſarily and unavoidably to be interpreted into "an open ulcer." But if any doubt ſhould ariſe, it will be completely removed on peruſal of the following paſſage, a few pages farther of the Firſt Lines: "A phthiſis from a ſuppuration in conſequence of pneumonic inflammation, is that which moſt rarely occurs in this climate; and a phthiſis does not always follow ſuch ſuppuration, when the abſceſs ſoon breaks, and diſcharges a laudable pus; but if the abſceſs continue long ſhut, and *till after a conſiderable degree of hectic has been formed*, a phthiſis is then produced, equally dangerous as that from other cauſes. (p. 400).

Nor have I been able to diſcover any thing in Home's excellent Diſſertation on Pus, that bears for his argument, although he quotes it likewiſe in his favour.

Brugman's Diſſertation I have not peruſed.

the Zoonomia, I ſhould be tempted to ſay, there are ſome modern practitioners who declaim againſt experience founded upon experiment and attentive obſervation, and without "thinking, that is, without theorizing, for themſelves, implicitly adopt, without analyſis, every new theory that ingenuity may invent, eſpecially if ſanctioned by the authority of a great name, although it may have no other merit than the charms of novelty to recommend it; and, acting under its influence, they ſeize with avidity upon ſome new remedy, which, from one or two trials, if they chance to be ſucceſsful, they uſher into the world with a character little ſhort of infallibility, and are aſtoniſhed, and not a little piqued, that theſe *unthinking* modern practitioners do not confirm in direct contradiction to common ſenſe, reaſon, and the deliberate reſults of a more enlarged experience:— Unfortunate is the patient who falls into ſuch hands.

No ſucceſsful attempt has yet been made to explain the operation of this plant on the human body: the conjectures hitherto offered, appear in many reſpects vague and contradictory.

If by leſſening the ſuſceptibility of the heart to the ſtimulus of the blood, its contractions be rendered leſs frequent, and the circulation of the blood thus proportionably retarded, it muſt neceſſarily be a direct ſedative to the heart and arteries, Hence, it was employed with this view, and with great ſucceſs, by Dr. Ferriar, in reſtraining inordinate arterial action in active hæmorrhage.

But if, on the other hand, ſerous accumulations be ſpeedily evacuated by its means in dropſy, it will, by parity of reaſoning, be contended, that it acts by a direct ſtimulant operation on the lymphatics and emulgent veſſels; conſequently, that it poſſeſſes directly ſedative and ſtimulant effects on the body at the ſame time. In this manner has its ſalutary agency in the cure of conſumption been explained; and this idea has been carried ſo far, that it is imagined, the action of the abſorbents is ſo powerfully excited, as not only to take up the pus as ſoon as ſecreted, but even the tubercles themſelves.

Reaſoning thus, however, muſt ever lead to endleſs difficulty and embarraſſment. It is, I preſume, as contradictory to the principles of ſound philoſophizing, as to the known laws of the animal machine, to aſſume it as a fact, that any ſubſtance is capable of producing two directly oppoſite effects at the ſame time on different parts of the ſame ſyſtem of veſſels. Whatever may be its mode of action, it muſt neceſſarily be the ſame, under ſimilar circumſtances, on all parts; the heart, vaſcular, and abſorbent ſyſtem. It is, by arguing in this manner, that there has been ſuch a contrariety of opinion on the *modus operandi* of opium; ſome regarding it as a ſedative, others as

as a ſtimulant, according as they took a more or leſs comprehenſive view of its effects on the body.

On attentively obſerving the action of the Digitalis, it ſtruck me as a ſingular circumſtance, that in all the caſes in which it was preſcribed, (now pretty numerous) unaccompanied with ſigns of ſerous effuſion, I could diſcover no ſenſible increaſe of the urinary ſecretion, nor any of the effects conſequent on the long continued uſe of large doſes of other diuretic medicines, even when the habit had been for ſome weeks under its full influence, although the colour ſeemed at times materially changed: Hence I inferred, that its operation as a diuretic, was immediately and neceſſarily connected with watery accumulation. But, on reflecting that the generality of diuretics increaſe the flow of urine, more or leſs, in health as in diſeaſe, moſt probably by a direct ſtimulant operation on the kidneys, I was unavoidably led to conclude, that the Digitalis poſſeſſed no ſuch effect; and that, as a ſucceſsful remedy in dropſy, its action was chiefly, if not ſolely, confined to the abſorbents. This opinion is ſtrengthened, if not confirmed, by the complete ſucceſs which followed its uſe in two caſes of hæmaturia, attended with dyſuria, and extremely painful micturition, in which I preſcribed it. And, if well founded, of which I have little doubt, it overturns Dr. Ferriar's notion, that "we are debarred from its uſe in one caſe of local increaſed action, that of diabetes." This ingenious author acknowledges his inability to explain theſe *apparently* oppoſite effects, and leaves the queſtion, *ſub judice*; for, ſays he, "I feel it impoſſible to explain this phenomenon at preſent." (p. 13.) And again: "This double effect of Fox-glove, however perplexing in theory, is extremely beneficial in practice, when it takes place, it adds, in hæmorrhages, a mode of natural evacuation, ſufficiently efficacious to relieve plethora, without directly debilitating the ſyſtem." (p. 15.)

But if the view in which I have conſidered this part of the ſubject ſhould be correct, the difficulty is completely removed. It cannot be denied, that by its uſe the lymphatics are placed in a condition of taking up ſpeedily from cavities, inordinate quantities of effuſed fluid; yet, I truſt, I ſhall advance ſome ſteps in proving, that this is not by a ſtimulant operation; indeed, if its ſedative effects on the heart and arteries be admitted, this idea muſt neceſſarily be rejected. The manner in which the functions of the abſorbents are impaired in dropſy, and ſome other diſeaſes, ſeems as yet very imperfectly known; whether by paralyſis, inverted or retrograde motion, or the like, has not been ſhewn; but in whatever way this may be, the

the Digitalis poſſeſſes, in an eminent degree, the power of reſtoring them.

I ſhall be happy in finding my ſentiments, in this reſpect, coincide with thoſe of Dr. Kinglake. In one of his ingenious Communications he obſerves, "My opinion of the *modus operandi* of Digitalis is founded on a principle of lymphatic circulation, that wholly rejects the prevailing but gratuitous notion of the lymphatic veſſels, abſorbing and propelling by virtue of any independently active or contractile power, &c." (*Ib. vol. iii. p.* 125.) Yet, I ſee difficulty in reconciling a direct ſedative operation, which I ſuppoſe this herb univerſally to poſſeſs on the body, with the fundamental principles of the Brunonian doctrine, which he has with ſo much ability ſupported. Permit me in this place to obſerve, in reply to his very candid and liberal remarks on my former paper, that nauſea has, with me, never interfered with the ſalutary agency of Digitalis in conſumption. In nearly all the caſes in which it ſucceeded, (now a conſiderable number) the ſtomach has been more or leſs affected; but when this organ, and the general habit were readily diſordered, its ſucceſs was very uncertain.

I wiſh, in a particular manner, to draw the attention of the medical world to this univerſally ſuppoſed action of the Foxglove on the kidneys; as on the point of view in which I have been led to conſider the ſubject, are founded the moſt important practical inferences, eſpecially in dropſy, which ſhall hereafter be conſidered in detail. With few exceptions, I obſerve the reports of others, who have uſed it in caſes unattended with watery accumulations, accord with my own obſervations. Some ſay nothing of its diuretic effects, while others poſitively affirm, that no ſuch were obſerved. But, as many caſes of conſumption are conjoined with anaſarcous ſwellings, or water in the cavities of the cheſt, the practitioner may, in this reſpect, be ſometimes deceived. "I ſhall have occaſion," ſays Dr. Ferriar, "to mention ſome caſes, in which theſe two operations were combined in a remarkable degree." But I have in vain looked for theſe caſes in his laſt Eſſay.

I am happy in having it in my power to adduce an obſervation of Dr. Drake, in ſupport of the opinion I have been advancing. In endeavouring to maintain the ſuperiority of the tincture over the powder in conſumption, he ſays, "a material difference too, may be obſerved in their mode of operation; for whilſt the powder uſually increaſes, and changes in point of colour, the evacuation of urine, I have *never*, but in one inſtance, and that but in a ſlight degree, perceived a ſimilar effect from the uſe of the tincture." If he had *never* uſed the powder in conſumption, how could he obſerve any difference

difference in their mode of operation? And if he judged only of its effects in dropsy, the difference he mentions was a natural and a necessary consequence.

I venture now, from ample experience, and without the fear of contradiction, to affirm, that no such difference will be perceived by an unbiassed mind, in their mode of operation, in consumption.

I shall take my leave of the Doctor and the subject of the Digitalis, for the present, by assuring him, that, as the investigation of truth, the advancement of medical science, the lessening the sum of human misery, are, and have been, my sole objects in the present and in former discussions; however averse I may be to controversy of every kind, and unequal as I am to the task, when my humble talents are opposed to those of the author of "Literary Hours," I shall not shrink from any farther enquiry that may tend to promote these important ends.

July 1, 1800.

P. S. Since writing the above, while attending with Mr. Travis, surgeon, of East Bergholt, at Higham, one of the parishes which supplied me liberally with Digitalis last year, I was desirous of seeing the plant with this gentleman, more especially as he assisted, about a week before, as well as last year, in collecting the leaves with Dr. Drake. We were conducted to an eminence about two miles from the house where we were attending, and as many from East Bergholt. On the sides of several sandy barren hills, and in adjoining hedge-rows, we perceived some hundreds of plants, a few of which seemed taller than any I had ever seen; but so scantily supplied with thin, narrow, meager leaves, that a boy who accompanied us was some hours in filling a small basket. Mr. Travis informed me, however, they were inferior in every respect to those of his gathering, particularly some he and the Doctor found in a *shaded* lane. When dried, they were shrivelled and discoloured, and apparently far inferior to those of the two gardens already mentioned, as well as that of R. Andrews, Esq. Receiver General for the county of Essex, on which some experiments shall soon be made. Were I to trust to these, I am persuaded I should be disappointed. In hot, dry summers, like the present, when every vegetable growing on sandy soils and elevated situations is soon dried up, it is probable, the Digitalis may be found in higher perfection in *shaded* lanes, where it has more moisture, and is defended from the scorching rays of the sun.

I have lately sent two quarts of the tincture, and a few ounces of the dried leaves of my own growth, to Apothecaries

Hall, as ſpecimens to be referred to, and uſed by ſuch of the Faculty in town as may be intereſted in the ſucceſs of this plant; and may wiſh to ſee and make experiments upon the genuine preparation.

The mixture is made in the proportion of one ounce to eight; and I beg again to obſerve, that this quantity furniſhes more of the active parts of the leaf, than the ſpirit is capable of taking up and retaining; after ſome weeks digeſtion, a conſiderable portion of extract remaining behind on the filtering paper. The ſubject is now, however, in much better hands. In a letter, the learned Preſident of the College has done me the honour of writing me lately, after politely ſaying, "that I deſerve the thanks of the Faculty, for the attention I have paid to a drug of great efficacy;" adds, "that he will loſe no opportunity of mentioning my improvements to the gentlemen of the college, and of trying the effects of my tincture."

Chemical Experiments and Observations, on the Extraction of Sugar and Syrup from Indigenous Plants. By Sigism. Henry Hermbstaedt.

FROM the chemical analyſis of vegetable ſubſtances, and the knowledge of their conſtituent and other particles contained and mixed with them, it is ſufficiently evident, that the Eaſt and Weſt Indies are not the only countries provided by Nature with ſaccharine plants, but ſaccharine matter is abundantly found in other productions of the vegetable kingdom; and it only requires an aſſiduous examination to point out thoſe vegetables, from which it may be moſt copiouſly, and in the leaſt expenſive way, obtained.

Among the plants hitherto examined, none deſerve to be ranked ſo near the true ſugar-cane, as the whole genus of maple trees; and, particularly, the ſugar and ſilver maple, *Acer ſaccharinum*, and *A. daſycarpon ehrh.* Both trees have been uſed for theſe fifty years to obtain ſugar from,* which in the laſt eight years has proved to be exceedingly profitable.† By my

* An account of a ſort of ſugar made of the juice of maple in Canada; Philoſophical Tranſactions, No. 171. Klam, in the Tranſactions of the Royal Swediſh Academy of Sciences, year 1751. Memoires ſur les ſucre d'Erable uſité dans le Canada, &c. Hiſt. 1757.

† Notices ſur l'Erable á ſucre des états unis, et ſur les moyens d'en extraire le ſucre, &c. par M. Ruſh, in Rozier's Obſervations ſur la Phyſique, &c. Tom. xli. Paris, 1792.

my own experiments, which I have repeatedly made ſince the winter of 1796, I found out, that from all ſpecies of maples, ſugar may be with more or leſs profit obtained, and that the ſugar and ſilver maple growing even in Germany, though not in the beſt ſoil, give a very good raw ſugar, not inferior to the beſt Weſt India cane-ſugar, and which is got ſo cheap, that a pound of it will come no higher than eighteen or twenty pfennige, or about two-pence halfpenny; and only a groſhen, or a penny, when, inſtead of charcoal, common coal or turf are employed for boiling the juice, and particularly when the operation is made upon a large ſcale, as one labourer is able to attend 500 trees during the period of tapping them. The proceſs of boiling the juice is, beſides, ſo very ſimple, that any perſon may ſoon learn it. But theſe advantages are only to be expected from the ſugar and ſilver maple, as the other ſpecies, *Acer negundo*, *A. campeſtre*, *A. platanoides*, and A. pſeudoplatanus contain a leſs quantity of ſugar, which is alſo not ſo rich in ſaccharine matter. However, as plantations of thoſe maples require a ſpace of twenty or twenty-five years before the trees are large enough to admit tapping, it will not be improper, but of great utility to the community, to examine in the mean while thoſe indigenous plants, from which likewiſe a uſeful ſubſtitute for the Weſt India ſugar may be extracted; and it is with this view I have made the following experiments.

1. *Experiments to obtain Sugar from India Corn.*

India corn, (zea mays) is ſaid to contain, according to Vonſuſti,‡ ſugar, particularly in the nodes of the young ſtalks, from which Mr. Jacquin of Vienna,§ has ſucceſsfully prepared it; and this is farther confirmed by Mr. Marabelli ‖ in a diſſertation on the ſubject. It is likewiſe reported, that the extraction of ſugar from the ſtalks of India corn, growing particularly in marſhy ſoils, has been tried in Italy upon a large ſcale, but afterwards left off again, as it was found not to anſwer the purpoſe, the ſugar thus obtained being more expenſive than common raw ſugar. To be convinced by my own experience on this ſubject, I made ſome experiments, of which the following are the reſults: A quantity of India corn was cultivated, in a tolerable and ſomewhat marſhy ſoil, for the purpoſe. When the young plants were about ſix inches high,

‡ Okonomiſche Schriften, i. e. Economical Writings, Tom i. p. 307, and Tom ii. p. 191.

§ Crell's Chemical Annals, 1784, Vol. I.

‖ Franc. Marabelli de Zea Mays planta, analytica diquiſitio. Pavia, 1793.

the leaves, when chewed, had a ſweetiſh taſte, but the ſtalks, particularly about the nodes, taſted like ſugar. Theſe young plants being cut off as near the ground as poſſible, freed from the leaves, and ſufficiently cleaned, ten pounds of them were cut in pieces, and being pounded in a ſtone mortar, the juice was expreſſed, which weighed three pounds. This juice, whoſe ſweetiſh taſte had ſtill a diſagreeable flavour of herbs, was clarified with the white of eggs, after which that taſte was ſcarcely perceptible, and being thickened to the conſiſtence of a ſyrup, eight ounces of a very agreeable taſting ſyrup were obtained.

2. *Examination of the Spikes of India Corn.*

As the young ſpikes, when they are beginning to form, poſſeſs a very agreeable ſaccharine taſte, they were thought fit for being examined. Ten pounds of them were accordingly ſqueezed in a ſtone mortar, and the juice expreſſed, after the leaves had been ſtripped off. Theſe gave four pounds of a milky juice, which could not be rendered perfectly clear by the white of eggs. By a ſlow evaporation, to the conſiſtence of a ſyrup, nine ounces of an agreeable taſting brown ſyrup were got, but which differed from the former by being more mucilaginous.

3. *Examination of Stalks of India Corn of a more advanced Growth.*

Twenty pounds of theſe ſtalks were cut in pieces, and, with the addition of water, ſqueezed in a ſtone mortar and the juice expreſſed, which poſſeſſed a diſagreeable and ſomewhat acrid taſte. Being in the ſame manner clarified, and thickened to the conſiſtence of a ſyrup, twelve ounces of ſyrup were obtained, which had a diſagreeable ſaline taſte, and might rather be conſidered as a vegetable extract than as ſugar.

4. *Experiments for obtaining dry Sugar from India Corn.*

To learn whether it was poſſible to exhibit a cryſtallizable ſugar from this plant, the ſyrups prepared from the young ſtalks and the ſpikes were each diſſolved by itſelf in freſh lime-water, and gently boiled, by which a great part of their impurities was carried off. The liquors being ſtrained through a woollen cloth, each of them was boiled to the thickneſs of a ſyrup, which was put in a glaſs, and ſet for eight months in a warm place, when little cryſtallizations of ſugar appeared, which were with difficulty ſeparated from the fluid. For this purpoſe, each ſyrup was evaporated by a gentle fire till it became dry, and this maſs was digeſted with alkoholized ſpiritus vini to ebullition.

ebullition. The fluid, ſtill hot, was inſtantly poured through ſome linen, whereon the mucilaginous parts remained; but on cooling of the ſpiritous ſolution, a true ſugar, of a yellow colour, cryſtallized in ſmall grains. The alkohol being drawn from the remaining fluid by diſtillation, another portion of ſugar was got by gentle evaporation, and altogether two ounces from the ſyrup of the young ſtalks, and one ounce and a half from that of the ſpikes.

By theſe experiments it is ſufficiently ſhown, that from the young freſh ſtalks, as well as from the ſpikes of India corn, a true ſugar can be extracted; but as its ſeparation from the gummy and other particles mixed with it, is attended with ſuch difficulties, and the gain ſo very inconſiderable, that a pound of raw ſugar from this plant would coſt one rix-dollar, or above three ſhillings, it appears that no profit or economy will ariſe from the fabrication of this ſugar.

5. *Experiments for obtaining Sugar from the Siberia Cow-parſnep.*

The Ruſſian cow-parſnep, *(Heracleum ſphondylium Linn. Heracleum Sibericum)* has been long known as a plant containing a great deal of ſaccharine matter, in which reſpect, according to Steller, (in his Travels to Kamtſchatka, in German) it deſerves the next place to the ſugar-cane, and the natives call it therefore *ſweet-herb*, or *kaſſh*. According to Gmelin (Flora Siberica, tom 1, p. 214.) it does not differ from our common cow-parſnep; but others think it a particular ſpecies, to which they give the name of *ſphondylium panaces*. The inhabitants of Kamtſchatka gather the ſtalks of this plant in June, and having ſtripped off the leaves, they ſhave off the outer ſkin with muſcle ſhells, and dry them in the ſun, and afterwards they are chewed for the ſake of ſucking out the ſaccharine matter. In drying, the ſurface of the ſtalks is covered with a white ſaccharine powder, which they ſeparate by ſhaking them in a leather bag; but 40 ℔. of them afford only a quarter of a pound of this powder ſugar, which therefore is conſidered as a great rarity. Beſides this, the ſtalks and roots of the plants are employed for obtaining a ſort of brandy.

I was ſupplied with ſome freſh plants of the Heracleum Sibericum for my experiments; but finding that the ſtalks were by no means ſo rich in ſugar, as it is related of thoſe plants growing in Siberia, I tried the roots, of which I got four pounds, whoſe taſte is ſweetiſh like that of parſneps. Having freed them from the outer ſkin, they were dried, but no ſaccharine cruſt appeared on the ſurface; they were therefore ground, and being mixed with water, the juice was expreſſed, which

taſted

taſted ſweetiſh but a little acrid. Being boiled with the white of eggs, and clarified, it was thickened to the conſiſtence of a ſyrup, of which ſix ounces were got, wherein, after a ſpace of three months, a brown, grainy ſugar had cryſtallized, which, however, was not quite free from a diſagreeable flavour.—Though it is ſhown by theſe experiments, that ſugar may be obtained from that plant, yet the preparation of the ſugar is too expenſive for making uſe of it. It is, however, probable that the ſoil has a great influence upon the plant, and that therefore thoſe growing in Siberia are richer in ſugar.

6. *Experiments to obtain Sugar from the Muſt of Wine.*

It might be preſumed from the taſte of muſt obtained from ripe grapes, that a conſiderable quantity of ſaccharine matter is contained in it, though involved by mucilage. To try whether a true ſugar could be extracted from it, ſome experiments were undertaken. Eight Berlin quarts of muſt from ripe ſweet grapes, were ſeethed with the white of eggs, clarified, and filtered. The fluid being evaporated, gave three pounds of an agreeable but acidulous ſyrup. To take away this free acid, the ſyrup was diſſolved again in lime water, and ſo much of it added, till no acid was perceived by reagency. The fluid being again clarified and evaporated, a very agreeable ſyrup was obtained, but from which it was by no means poſſible to procure cryſtallized ſugar. However, this ſyrup would not be very profitable at the high price of muſt.

7. *Experiments with the Juice of the white and black Birch for the ſake of obtaining Sugar.*

It has been much doubted, whether ſugar might be got from the juice of thoſe trees. Mr. Stæhlhammer, (Tranſactions of the Swediſh Academy, Vol. xxxv.) prepared from the juice of the white birch, *Betula alba*, tapped in the ſpring, a conſiderable quantity of ſyrup, ſuperior to the common brown ſyrup, but not ſo good as that from the maple. Mr. Kalm (*Ibid.* Vol. xiii.) relates, that from the North American black birch (*Betuli nigra, carpinifolia*), alſo called ſugar birch, a great deal of ſugar is obtained, which is not ſo ſweet as that from the maple. Having received a ſufficient quantity of the juice of both trees, I found that from one hundred and fifty Berlin quarts of the juice, extracted in April from fifty trees of the white birch, two pounds and a half of brown ſyrup were obtained, out of which no cryſtallized ſugar could be got. But fifty quarts of the juice of the black birch gave one pound and a half of a very good and uſeful ſyrup, yet inferior to that of the maple. From this ſyrup a conſiderable portion of cryſtallized ſugar ſeparated;

parated; by which it appears, that ſugar may be obtained from the black birch, but much inferior in quality to that of the maple, and, at the ſame time, more expenſive.

8. *Experiments to obtain Sugar from the Beet. (Beta cicla alba.)*

It is more than fifty years ſince the late Mr. Marggraff made ſeveral experiments with different ſpecies of the beet, to try how far it was poſſible to obtain a uſeful ſugar and ſyrup from them; in which, however, he ſeems to have particularly ſucceeded with *Beta cicla*, as he extracted from 2 lb. of its freſh roots, half an ounce of good ſugar. Induced by theſe experiments, I took 68 lb. of the roots of beet, which being ſufficiently cleaned, were ground and ſqueezed, and the reſiduum being moiſtened with warm water and again expreſſed, about 20 quarts of juice were obtained. A third part of this having evaporated, it was then mixed with 20 quarts of lime-water, and boiled for half an hour. The juice thus become clear, and of a yellowiſh colour, was filtered, and afterwards thickened to the conſiſtence of a ſyrup, of which 6 lb. were obtained in this way, of a brown yellowiſh colour, and an agreeable taſte. A part of it was poured into an evaporating glaſs diſh, in which ſome glaſs tubes had been placed; and being expoſed for ſixteen weeks in a warm ſituation, thoſe tubes were found to be incruſted with cryſtals of ſugar, about the ſize of a pea, and very much like brown ſugar-candy. A buſhel of the beet roots coſts about half a crown, and the expence of obtaining a ſyrup from them is not much above ſix-pence; a pound of the beet ſyrup would, therefore, come no higher than about four-pence, which is leſs than the price of the common ſyrup in Germany; conſequently, it might prove a very advantageous ſubſtitute. The ſugar may likewiſe be obtained cheap enough, in compariſon to the preſent high price of the cane-ſugar; but the operation to extract it is very long and ſlow; and though it equals the ſugar of the maple in goodneſs, yet the proceſs of extracting it is far more expenſive.

9. *Experiments to obtain Sugar from another Species of Beet, (Beta vulgaris altiſſima, or Beta cicla altiſſima Jacquin. — Bunkelrube, Germ.)*

This ſpecies of beet-root is commonly cultivated in ſome parts of Germany, as a very good food for cattle, and differs from the former by being more ſucculent and of a ſweeter taſte. The roots grow larger, and contain more juice, when cultivated in a rich ſoil. A buſhel of theſe roots, which weighed about 125 lb. after the outer rind had been taken off, were ground

ground upon a grater; and after a part of the juice had discharged itself during the grinding, the rest was expressed; by which means, 24 quarts of a very sweet violet-coloured juice were obtained. Taught by repeated experiments, I first boiled it to the evaporation of one-third, by which a great deal of albuminous matter separated. When cool, it was poured through a woollen cloth, mixed with 24 quarts of lime-water, and boiled for half an hour. The juice became in this way a clear fluid of a yellowish colour, being freed from a great part of its impurities. After having cooled and strained it, it was boiled to the thickness of a syrup, of which eight pounds were got. A part of this was likewise exposed in a deep evaporating dish, in which glass tubes were put, to a gentle evaporation, and after two months a deep yellow sugar was found to have crystallized on those tubes. As the crystallization of sugar proceeds very slowly in this syrup, as well as in the former, the quantity of sugar which it may contain cannot be determined; but as this syrup is by far more agreeable than common syrup, and moreover as, including all expences, a pound will cost no more than about three halfpence, it may likewise serve as a useful substitute. This species of beet is the same which Mr. Achard, of Berlin, has since used for the fabrication of sugar upon a larger scale.

10. *Experiments for obtaining Sugar from the red Beet, (Beta rubra, Beta cicla rubra, Jacquin.)*

The possibility of obtaining sugar from the common red beet has been already shown by Marggraff; I proceeded therefore in the same way as with the former, and obtained from a bushel of its roots six pounds and a half of syrup, which had rather an unpleasant rough taste, from which, however, it may perhaps be freed. I did not try to get sugar from it, though Marggraff obtained from 8 ounces of dried roots 2½ drachms of sugar.

[To be continued.]

On

On the Introduction of the Vaccine Inoculation at Paris.

Paris, le 14 Germinal (5 Avril, 1800.)

A Monsieur PEARSON, Médecin de l'Hopital de l'Inoculation Vaccine, à Londres.

LES Journaux nous ont fait connoître, Monsieur, les Essais faits en Angleterre, relativement à l'Inoculation de la Vaccine, et dont les succès sont dus, *en grande partie, à votre* zèle eclairé. Quelques amis de l'humanité et de la science, que vous cultivez avec tant de distinction, ont formé le projet d'introduire en France, une pratique qui paroit promettre de si grands avantages. Ils ont proposé, a cet effet, une souscription qui est sur le point d'être remplie. *Vous en trouverez ci joint le prospectus.* Mais pour mettre à éxécution les vuës qui y sont exposées, nous avons besoin de votre intervention, et c'est avec confiance que nous la sollicitons.

Quoique l'on ait commencé ici quelques essais sur la Vaccine, dont l'ecole de médecine s'est occupée, plus particulièrement, on n'a pû cependant parvenir encore a aucun résultat positif, la difficulté de se procurer de la matière *assez récente*, en a sans doute été la principale cause. Nos artistes semblent ne point connoître cette affection sur les vaches. Dans une seule circonstance, on a cru reconnaitre la maladie sur des animaux de cette espéce, et on a saisi cette occasion de recueillir du virus, qui a été employé concurrement *avec de la matière reçue de Geneve et d'Angleterre, mais sans aucun succes encore bien reconnu.* Nous nous trouvons donc prives du premier moyen nécessaire pour commencer nos essais, et *c'est a vous que nous nous addressons pour nous le procurer.*

Nous desirons, si toutes fois vous jugez ces précautions utiles, recevoir des croutes ou pustules recueillies sur les vaches, et sur les sujets inoculès, et des fils ou de petites eponges imprégnés de la matière, prise sur les uns et sur les autres, de ces mêmes croutes ou pustules fraiches et de l'ecoulement qui s'etablit à la plaie formée par l'affection locale de la partie inoculée: les differentes especes de matières ou substances devroient être distinguées par une indication particulière. Si votre methode de conserver les fils dans le gaz azote ou le gaz hydrogéne, vous paroit de quelqu' avantage, nous attendons *de votre zéle*, que vous voudrez bien l'employer. Nous prenons, avec notre ministre des relations extérieures, les mesures convenables, *pour que les moyens d'envoi les plus surs, les plus commodes, et sur tout les plus prompts soient à votre disposition.*

ſition. La ſociété ne mettra pas moins d'empreſſement, Monſieur, a faire connoître les ſervices que aurez bien voulu lui rèndre et à vous informer du réſultat de ſes recherchés, *dont le mérite vous ſera du en grande partie*, ſi à l'envoi de la matière que nous vous demandons, vous avez la bonté d'ajouter *quelques inſtructions particulieres*, dont nous nous feliciterons de pouvoir profiter.

Salut, *Eſtime* et *Devouement*, les Membres compoſant le Comité Médical de la Société formée à Paris, pour l'Inoculation de la Vaccine.

THOURET, Directeur de l'Ecole de Medecine.
PINEL, Prof. de l'Ecole de Medecine.
ROUSELLE CHAMSERU, Med. de l'Armée.
PARFAIT, Chir. Inoc.
TESSIER, de l'Inſtitut.
DE LA PORT, Med. des Hopit. Milit.
HUZARD, de l'Inſtitut.
CABANNEZ, de l'Inſtitut. et Prof. de l'Ecole de Med.

The above letter, as appears, was addreſſed to Dr. Pearſon, who, however, in place of returning an anſwer in his own name only, preſented it to the *Vaccine Inſtitution*, where it was determined that the commiſſion ſhould be executed by the *Medical Eſtabliſhment*. Accordingly a packet, containing vaccine matter on *glaſs*, on *lancets*, and on *thread*, incloſed in a bottle filled with hydrogen gas, and a letter of inſtructions, ſigned by all the members of the Medical eſtabliſhment, were ſent to Paris, on the 12th of May laſt, with the permiſſion of Lord Grenville, through the French Commiſſioner, Mr. Otto.

How well the vaccine matter, thus forwarded, anſwered the ſanguine expectations of the Pariſian Phyſicians, notwithſtanding the journey and delay, is ſufficiently proved by the following Extract from the Gazette Nationale; and other French papers furniſh ſimilar reports.

Gazette Nationale, 23 *Prarial*, *An.* 8, *de la Republique Françoiſe*, *une et indiviſible.*

Sur l'Inoculation de la Vaccine.

Le 13 Prarial l'Inoculation de la Vaccine à eu lieu ſur *trente Enfans*, avec la matière envoyée d'Angleterre et d'apres les procédes recommandés. Des ſignes d'infection ſe ſont manifeſtés *ſur neuf d'entre eux* aux époques et avec les caracteres annonces par le Docteur Pearſon, et d'autres membres du Comité inſtitué à Londres pour l'Inoculation de la Vaccine. Il eſt a remarquer que les Medecins Anglois avoient exprimé, dans leur lettre, " Que l'on devoit ſe croire heureux, vu le

" laps

« laps de tems entre la collection de la matière et de son ap-
« plication, si, sur vingt individus inoculés, un seul prenoit la
« maladie." Le 19, le 20, et le 21, *dix-huit enfans* sur lesquels la premiere Inoculation n'avoit point eu d'effet, ont été inoculés de nouveau avec la matière recueillie sur ceux chez qui la premiere inoculation avoit pris. Le Comité continue ses essais et instruira le public des resultats ulterieurs.

Pour le Comité Médical,
THOURET.

VACCINE INOCULATION, from the Official Report at PARIS.

Inoculation House at Vaugirard, July 27, 1800.

We have now got Dr WOODVILLE, the Physician to the Inoculation Hospital at London. This learned man, to whom we are indebted for an Essay on the Cow-pox, translated into French by Dr. Albert, animated by a generous zeal, and deserving in every respect our gratitude and praise, is come to assist our experience in Vaccine Inoculation.

His practice has constant and invariable success, as more than 6000 children inoculated by the cow-pox matter, and preserved from the Small-pox, promise us effects equally satisfactory.

Does not this preservative from the usual disease seem, by its beneficent quality, to be a kind of prodigy, when we consider that the labour it gives rise to is nothing more than the puncture which one makes for the purpose of inoculating, and is exempt from the slightest accident.

COLON, M. D. Member of the Vaccine Medical Committee.

The Vaccine Institution, which has already been so useful in England, and communicated with various parts of Europe, to introduce the Cow-pock Inoculation, has sent the following notice.

Vaccine Inoculation Institution, Warwick Street, Golden Square.
July 28, 1800.

From the increase of patients, and the numerous applications for Vaccine matter, the Subscribers are hereby informed, that it has been resolved to inoculate every Friday as well as Tuesday, under the direction of the Medical Establishment, which at present is as follows:

G. PEARSON, M. D. F R. S. L. NIHELL, M. D. and T. NELSON, M. D. Physicians.

THO. KEATE, Esq. F. R. S. and JOHN RUSH, Esq. Consulting Surgeons.

R. KEATE, Esq. J. GUNNING, Esq. and J. C. CARPUE, Esq Surgeons.

A. BRANDE, Esq. F. RIVERS, Esq. and Mr. E. BRANDE, Visiting Apothecaries.

Mr. J. LEWIS, Resident Apothecary, to whom letters (post paid) may be addressed.

The Public are desired to notice, that the Medical Establishment do not authenticate Vaccine matter unless it be delivered under the appropriate seal of the Institution. By order,

W. SANCHO, Secretary.

CRITICAL RETROSPECT

OF

MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

Observations on the Cow-Pox, by WILLIAM WOODVILLE, M. D. Phyſician to the Small-Pox and Inoculation Hoſpitals. 8vo. pp. 43. London, W. Phillips.

WHEN the Vaccine Inoculation began to engage the attention of the public, it was immediately perceived by its nature, that two very important pillars of its temple reſted on the abſence of eruptions, and the impoſſibility of the contagion being communicated, except by inſertion of the virus, or inoculation. The inconvenience ariſing from theſe ſources had always been conſidered as ſuch formidable objections to the Small-pox, that very expenſive eſtabliſhments had at that time been begun on the continent, with a view to exterminate it altogether.* When Dr. Jenner therefore, found one part of his immortal diſcovery to appear defective in this reſpect in the vicinity of the metropolis, and in thoſe patients particularly who were inoculated with matter ſent from thence, and ſcarcely any others, it was impoſſible for him, in his ſecond publication on the ſubject, to avoid offering ſome conjecture on the cauſe of this diverſity. In doing this, he *criminated* no man; who indeed could criminate ſuch a character as Dr. Woodville? We are therefore much hurt to obſerve, that Dr. W. ſhould find himſelf "unable to avoid a certain degree of *recrimination*, which attaches to a man, for whom he has long entertained a friendly regard, and to whom the public is under the great obligation of having been made acquainted with a diſcovery, which promiſes the moſt important benefits to ſociety." There is a gentle mildneſs of temper, in which the cauſe of truth delights; but which we do not find ſo conſpicuous in the firſt part of this pamphlet as we expected. With reſpect to the refutation of Dr. Jenner's conjecture, the public will judge for themſelves when they have read Dr. W's letter.

The following paſſage, we apprehend, admits every thing that Dr. Jenner ſuppoſed:—"Although I differ in opinion from Dr. Jenner in not imputing the puſtular eruptions, produced in the caſes at the hoſpital, to any adulteration of the vaccine matter employed in the inoculations, yet I readily admit that they have been and ſtill continue to be the effect of ſome adventitious cauſe, independent of the Cow-pox.

"This

* See Number XVII. p. 90.

"This will clearly appear from the following obſervations, which likewiſe tend to place the ſubject in a new light.

"I had not long practiſed the vaccine inoculation at the hoſpital, before I was requeſted to extend it into private families in the metropolis, where I ſoon diſcovered that the Cow-pox uniformly appeared in its mildeſt form, and was never attended with eruptions. I alſo ſupplied ſeveral medical gentlemen with the vaccine matter, which was uſed by them with the like reſult. Hence I began to ſuſpect that there exiſted ſome *peculiar* cauſe, which rendered the patients under the vaccine inoculation in the hoſpital more liable to puſtules than others: and that this ſuſpicion was well founded I have ſince, from daily experience, been fully convinced.

"At various times I procured the vaccine virus, as produced in different cows, and with it inoculated patients in the hoſpital; but the effects of all the matter I tried were perfectly ſimilar: and puſtules proved to be not leſs frequently the conſequence of theſe trials than of thoſe made with the matter formerly employed.

"The laſt matter of the vaccine poiſon which I introduced into the hoſpital, was obtained from Dr. Jenner, and originally taken from Clark's cow, before noticed: with this matter I inoculated at the hoſpital on the ſame day three patients, on one of whom about 100 variolous-like puſtules were produced. This inſtance, and numerous others of the like kind which I could adduce, decidedly prove, that where there can be no doubt entertained of the purity of the Cow-pock matter, with which the patients in the hoſpital are inoculated, puſtules will frequently be the conſequence.

"On the other hand I have to obſerve, from daily experience during the laſt twelve months, that among the great numbers of children reſiding in various parts of London, to whom I have transferred the Cow-pock infection, no inſtance of puſtules that maturated has occurred. Now, as theſe different effects of the diſeaſe between the patients in, and thoſe out of the hoſpital did not depend upon any difference or alteration of the matter with which the inoculations were performed, the only cauſe remaining to which the frequent occurrence of puſtules on the former can be rationally referred, is the variolated atmoſphere of the hoſpital, which thoſe patients were neceſſarily obliged to inſpire during the progreſs of the Cow-pox infection.

"Did it not lead me too much into detail, I ſhould ſhow from many circumſtances relating to the patients in the Inoculation Hoſpital, that other reaſons might from thence be adduced to ſupport the opinion here advanced.

"Mr. Evans, Surgeon, at Ketley, in Shropſhire, is the only perſon, except myſelf, who has given an account of the variolous and vaccine inoculations carried on ſeparately in different perſons at the ſame time, and in the ſame houſe, ſo that ſeveral of his patients, while under the vaccine infection, were expoſed to the variolous effluvia. The number of thoſe which he inoculated for the

Cow-pox

Cow-pox amounted to ſixty-eight; and it is worthy of remark, that more than one-half of theſe patients had puſtules. It is true that the eruptions very rarely maturated; but ſtill their frequent occurrence would ſeem to ſhow they aroſe from the ſame cauſe as thoſe at the hoſpital. I ſuſpect alſo, that in thoſe places where the Small-pox is epidemic, or very generally prevailing, the Cow-pox will be found to be equally liable to excite puſtules as in the hoſpital.

"During the very general and fatal prevalence of the Small-pox at a village eight miles diſtant from London, more than 100 perſons were inoculated under my direction for the Cow-pox, of whom one in five had eruptions; and as theſe furniſh the only inſtances which I have experienced, out of the hoſpital, of the Cow-pox producing the variolous-like puſtules, I am diſpoſed to attribute them to the adventitious co-operation of the variolous atmoſphere to which the patients were expoſed. In what way the variolous miaſms act in thus modifying the Cow-pox, or why they co-operate in ſome and not in all caſes of vaccine infection, I ſhall not even venture a conjecture: the cauſes probably will continue as inexplicable as thoſe conſtitutional peculiarities which produce all the varieties of Small-pox."

The practical importance of the following facts, will be a ſufficient apology for our inſerting them.

"In order to ſhow that thoſe who had undergone the Cow-pox reſiſted the infection of the Small-pox, I obſerved in my *Reports*, that upwards of 400 of the patients who had received the former diſeaſe, were afterwards inoculated for the latter, which in no inſtance was produced; though more than 100 of the patients had the vaccine diſeaſe ſo very ſlightly, that it neither produced any perceptible indiſpoſition nor puſtules. In addition to this, I can now ſay, that more than 1000 of thoſe who had undergone the new inoculation, have been put to the ſame teſt, and that the like reſult has been experienced.

"The above facts, added to a multiplicity of others of a ſimilar import, publiſhed by ſeveral profeſſional men, clearly demonſtrate, that the Cow-pox inoculation promiſes moſt important benefits to ſociety; and under this conviction I congratulate the public on the great progreſs it is making, by which the real value of the invention will ſoon become generally acknowledged, and duly appreciated.

"Thoſe who have had much experience in inoculating with the matter of the vaccine pock, muſt have obſerved that it is more apt to fail in communicating the infection than variolous matter, eſpecially if it be ſuffered to dry upon the lancet before it is uſed. This does not ſeem to depend upon the virus of the former being more volatile and more eaſily carried off by evaporation than that of the latter, but from its becoming more hard and leſs diſſoluble upon exſiccation. Care ſhould therefore be taken to moiſten it a conſiderable time before it is uſed. When fluid matter is employed, the lancet ſhould be held nearly at a right angle with the ſkin, in order that the infectious fluid may gravitate to the point of the

the inſtrument, which in this direction ſhould be made to ſcratch the cuticle repeatedly, until it reach the true ſkin, and become tinged with blood. This method has many advantages over the common puncture, and I have found it a more convenient and effectual mode of performing the inoculation than any other. It may be remarked, however, that there are perſons who have never had the Small-pox, and are incapable of receiving it by inoculation, or by any other means whatever. The proportion of theſe to thoſe liable to the diſeaſe has been differently ſtated by authors; I have not found them to be more than about one in ſixty; but as ſuch perſons alſo reſiſt the infection of the Cow-pox, the inoculation of the latter muſt therefore ſometimes fail, independently of the mode in which it is performed, or of the matter employed."

Reflections on the Cow-pox, illustrated by Cases to prove it an absolute Security against the Small-pox; addressed to the Public, in a Letter to Dr. Jenner, from William Fermor, Esq. 8vo. pp. 47. London. Robſon and Robinſon.

The firſt part of this Letter contains general obſervations on the Small-pox, and the preference due to the Cow-pox, the marks by which the genuine Cow-pox is diſtinguiſhed, and a ſtatement of the opinions of others reſpecting its power of permanently preventing the variolous infection.

The author then obſerves, "That the genuine Cow-pox is a certain preſervative againſt the Small-pox, I flatter myſelf, the following caſes will ſufficiently prove. They are ſelected from many I could bring, of perſons who having previouſly had the Cow-pox, have never been able to receive the infection of the virus from the Small-pox, though inſerted a conſiderable time after, and at different periods. Theſe caſes are well known to practitioners and inoculators in this neighbourhood, and I have received moſt of them from the parties themſelves.

"First Caſe. Jeoffry Tredwell is a reputable farmer, and a tenant of mine, at Cheſterton, in this neighbourhood. His brother, William Tredwell, being employed conſtantly in milking the cows, was infected with the Cow-pox, and had the diſeaſe ſeverely in his hands and fingers. Jeoffry not being engaged ſo much in milking as his brother, did not receive the infection. About three years after, theſe two brothers were inoculated with variolous matter, by Mr. Liſter, of Charlbury, an eminent practitioner, at a houſe appropriated for that purpoſe. William Tredwell, who had undergone the Cow-pox, could not receive the infection, though he was inoculated ſeveral times, and remained in the houſe with the other patients. Jeoffry, who had not been infected with it, had a very full Small-pox eruption.

"Second Caſe. Alban Collingridge had the Cow-pox about five or ſix and twenty years ago, at his father's farm, at Poodle, which affected his fingers in a violent degree. About four years after, he was three times inoculated for the Small-pox, by Mr. Liſter, without

out effect. Two of his brothers, who had never had the Cow-pox, received the variolous infection. He slept with them in order to take it, but no consequence ensued. He has frequently since been exposed to its contagion, and has very lately inoculated his children with the Small-pox, without being in any shape infected with it himself.

"Third Case. Mr. Stevens, a reputable farmer of East Claydon, in the county of Bucks, had the Cow-pox on his farm, in the year 1764.—He himself was infected with it by milking the cows. About four years after, he was inoculated with variolous matter, but without effect. About the year 1791, his family were inoculated with the rest of the parish for the Small-pox, with which they were all infected, but he was not, though he attended them the whole time. This case must appear decisive with regard to the security the Cow-pox matter affords against the variolous infection, as there was a space of twenty-seven years between his having received the disorder from his cows, and his attending his family in the inoculated Small-pox; and an interval of four years between the time he had the Cow-pox, and his being himself inoculated with the Small-pox without effect."

Many other cases are given, equally conclusive with the above; and a list of 326 persons who were inoculated for the Cow-pox, of whom 173 were afterwards inoculated with Small-pox, without receiving the infection in any instance.

Mr. F. concludes his Letter with the following recapitulation: "It is unnecessary for me to say any more on this truly interesting subject. I leave the impartial reader to his natural reflections; but I think, in consequence of the above premises, I may venture to say, that he will now be of opinion that the genuine Cow-pox is mild in its effects, congenial with every situation and employment of life, totally void of contagion, and a certain preservative against the baneful influence of the Small-pox. That no constitutional or family complaint can interfere with its effects, or prevent its adoption.

"To conclude; though the public have certainly great obligations to many distinguished modern practitioners, for having, by the cool regimen and present mode of treatment, considerably abated the natural virulence of the Small-pox, to you alone we are certainly indebted for its complete annihilation."

Medical Jurisprudence. On Madness; by JOHN JOHNSTONE, M.D. 8vo. pp. 56. London, 1800. Johnson.

THE Author informs us, that this is a part of an extensive work on the subject of medical jurisprudence, and which he should not have published separately, had he not been induced by some recent events. "I have not aimed," says he, "at collecting much of what has been said on the subject of insanity by others. The Anatomy of Melancholy, the works of Battie, Arnold, and Crichton, have exhausted all that can be quoted on the subject, and with Haslam's Practical Inquiry, and the Philosophy of Zoonomia, nearly

ly the whole that has ever been said. To these writings therefore the inquisitive reader may refer. I have made an effort indeed to compress, not to expand my materials; and such as they are, I now deliver them to the public, with the hope that they will tend to familiarise the scientific doctrines of insanity."

The Author thus sums up his opinions and advice on the subject of Insanity. "Thus then it appears, that melancholy, lunacy, insanity, madness, are the same disease—a disease of the organs of the mind, often called into action by vehement passions, or by injuries of different organs of the body.

"Madness can only be deemed an hereditary disease, insomuch, as children have a structure similar to that of their parents who have been mad, and as this peculiar organization is likely to be acted upon by the peculiar manners and habits of the parent in education.

"Madness has no lucid intervals; a man is either insane or not insane at a particular moment: unless indeed we be allowed to term every period, in which the hallucination of the maniac does not appear, a lucid interval. But this would be most absurd, for madness is a disease of the brain, and sensorial powers, and seldom discovers itself equally at all times. Madness is not always distinguishable from manner—for it assumes the form of the character, whatsoever that may be.

"The countenance of maniacs is marked by a peculiar wild stare, not to be mistaken by experienced persons, generally mixed with a suspicious or timid, and sometimes with a furious look. Their health is not always visibly affected, though, for the most part, the fibres of maniacs, or their powers of motion, are less irritable or mobile than in good health; hence they are costive, and difficult to be purged or vomited. Their sensorial powers, in some measure, benumbed; hence they feel pain with less acuteness, and are capable of bearing great extremes of heat and cold, hunger and thirst. Their pulse is generally slower than common, when there is no irritation nor disorganization.

When it is determined that a man is mad, he ought to be supposed incapable of acting. He may perchance act wisely, but reason being absent, it is solely from accident if he does so. A maniac cannot commit crimes, and therefore he ought not to be amenable to human law for their commission. He does not discriminate right from wrong.

"All maniacs should be controuled, but all do not require confinement. The necessity of confinement must be determined by the degree of fury, by the temper, and the habits of the maniac.

"Finally, Maniacs should never be entrusted with the management either of themselves, or any other persons, especially the young. There is no faculty more familiar to us than that of imitation; it is the first exercised by the infant, and it grows with his growth. Maniacs therefore should not be suffered to associate with young persons, who will be likely to imitate their actions. For by reiterated imitation, by slow yet certain steps, we acquire habits,

which not only fix the moral character of man, but frequently produce the moſt pernicious and incorrigible diſeaſes, both of body and mind."

The Edinburgh Practice of Physic and Surgery; preceded by an Abstract of the Theory of Medicine, and the Nosology of Dr. Cullen; and including upwards of Five Hundred authentic Formulæ, from the Books of St. Bartholomew's, St. George's, St. Thomas's, Guy's, and other Hospitals in London, and from the Lectures and Writings of the moſt eminent public Teachers. With four Quarto Plates, neatly engraved, representing the different Instruments used in Surgery. 8vo. pp. 920. price 14s. in boards. London, 1800. Kearſley.

This comprehenſive Compilation may be conſidered as a Medical Library for young ſtudents; and we think it may, for ſome time, ſupercede the neceſſity of any other. It will ſerve the purpoſe of a Text-book during their attendance on Medical and Surgical Lectures, and we may add Midwifery; for the diſeaſes of pregnancy, the puerperal ſtate, and thoſe peculiar to infants, are contained in it. We alſo find ſeveral diſeaſes not treated of by ſyſtematic writers in general, but only in diſtinct works, as Angina Pectoris, Poiſons, Suſpended Animation, Cow-pox, &c. The work is furniſhed with Indices to the Practice of Phyſic, the Surgery, the Materia Medica, and the doſes of medicines, as well as of the new and old names.

We recommend this book as a valuable addition to the library of the apothecary's ſhop.

Nosology: or, A Systematic Arrangement of Diseases, by Classes, Orders, Genera, and Species; with the distinguishing Characters of each, and Outlines of the Systems of Sauvages, Linnæus, Vogel, Sagar, and Macbride. Translated from the Latin of W. Cullen, M. D. late Professor of the Practice of Physic in the University of Edinburgh. 8vo. pp. 238. London, 1800. Robinſons.

This Tranſlation appears to us to be executed with great accuracy and fidelity; and is accompanied with the neceſſary Indices, and a Table of the Greek derivations of the names of the claſſes, orders, and genera.

A Practical Inquiry into Disordered Respiration; distinguiſhing the Species of Convulsive Asthma, their Causes, and Indications of Cure. The second Edition, corrected, with an Appendix. By Robert Bree, M. D. 8vo. pp. 300. London, 1800. Robinſons.

The deſign of this induſtrious Author is to aſcertain the real cauſes of Aſthma, and thence the ſpecies and method of treatment. The firſt edition, he informs us, "was publiſhed with ſome precipitation, and had the faults of diffuſeneſs, and want of perſpicuity; but its defects did not prevent the ſanction of it in this country, nor on the continent, where it has been tranſlated into two languages."

After a comprehenſive view of the opinions of others reſpecting the *ratio ſymptomatum*, and ſtating his objections to the doctrine of

ſpaſmodic

ſpaſmodic conſtriction, Dr. B. at p. 88, proceeds to the *diagnosis*, which we ſhall tranſcribe as a ſpecimen of the reaſoning and ſtile.

" Aſthma is ſo ſtrongly marked, that there can be little difficulty in knowing the diſeaſe; yet it will elucidate the ſubject, to ſhow its diſtinction from ſome other diſeaſes to which it may bear an analogy in its cauſes and effects.

" Defluxions on the upper part of the lungs and Sneiderian membrane are uſually inflammatory affections of the mucous glands which line the paſſages of the noſe, fauces, and trachea, as far as its diviſions, and poſſibly lower in the breaſt, but not extending to the extremities of the air pipes.

" The catarrhal diſpoſition is very frequently followed by Aſthma, becauſe repeated inflammation of the capillary veſſels and mucous excretories, may induce, in ſome habits, a loſs of tone, which may prevent their reſiſtance to a circulatory impulſe even leſs than healthy, and ſubject them to the influence of exciting cauſes of little force in compariſon with what they formerly ſubmitted to. For this reaſon, elderly perſons have their natural excretion of mucus much more copious, as they may have been more affected by catarrh, and they are accordingly more liable to Aſthma. If inflammatory diſpoſition be not wholly loſt in theſe perſons, by the progreſſive debility of the veſſels of the lungs, Peripneumonia Notha will be the character of the pulmonary diſeaſe, attended often with great danger.

" I am aware that this ſpecies will be deſignedly confounded by many reaſoners with the Humoral Aſthma; but it is time that the diſtinction of *Humoral* and *Convulſive* ſhould be better underſtood. If mucus be diſcharged in greater quantity in one caſe than in another, the reſpiratory actions being the ſame in both, there is no good reaſon for calling one only Convulſive. Is not every Humoral Aſthma Convulſive? If the unfortunate patient have ſo little irritability as not to be excited to cough and expectorate, the phlegm muſt ſuffocate him, if the abſorbing veſſels do not carry it off: and this proceſs is attended by Convulſive reſpiration. But though the Humoral muſt be Convulſive, the Convulſive Aſthma is not always Humoral; for we ſhall ſee that irritation may exiſt in a more ſubtle form than lymph.

" It is conſiſtent with the rules of the animal œconomy, that Catarrh ſhould not be indicated by thoſe violent contractions of the muſcles of reſpiration which take place in Convulſive Aſthma. Fever attends both Catarrh and Phthiſis; and we may obſerve, though we cannot aſſign a reaſon for the fact, that if fever ſuperſedes, it generally terminates convulſive motions.

" If Catarrh occaſionally lead to Aſthma, it ſtill oftener brings on *Phthiſis*, a diſeaſe which depends on a ſtate of the lungs, oppoſite to that which permits ſerous effuſion.

" In Aſthma, an exceſs of blood in the pulmonary veſſels may very probably precede the exhalation of the finer part into the veſiculæ and bronchia; this plethora is local, ariſing from the relaxed texture of the coats of the veſſels, and relieves itſelf by effuſion.

" In incipient *Phthiſis* the arterial impulſe is more conſiderable than in health, but the pre-diſpoſition of the pulmonary veſſels is not favourable to a relief by effuſion, till the fever has acquired ſtrength, and coagulable lymph inſtead of pelucid ſerum comes to be effuſed.

" It is therefore to be allowed, that there is a prediſpoſition, in conſequence of which inflammation will affect the arterial extremities, and produce Phthiſis, as doubtleſs there is a pre-diſpoſition leading to that atonic ſtate of the vaſcular pulmonary ſyſtem producing Aſthma.

" There may be alſo an intermediate ſtate, in which a balance is preſerved between the criſis of inflammation ſealing up the orifices of the arterial exhalents, and their diſtenſion ſo gradually acquired as to permit the

escape of the finer fluid, and consequent relief of arterial fulness; but it is probable that this balance cannot be long adjusted where the pre-disposing causes have had a considerable influence, and that if the exhalents do not dilate soon in consumptive habits, Phthisis must take place; and in persons of an opposite constitution, which I conceive is favourable to Asthma, the effusion of lymph into the vesiculæ and bronchia will determine, in no long time, the future character of the pulmonary disease.

"*Lethargic affections* have been considerably allied to pulmonary complaints in the consideration of many authors; so much so, as to create a question if the cause of lethargy did not exist in the lungs.

Hippocrates says, "lethargic diseases are the same as pneumonic, and not "altogether different from the humid peripneumony." (Peripneumonia Notha.) Some of his commentators have even defended this opinion by the practical remark, that lethargy is critically relieved by expectoration of purulent or serous fluid.

"The lethargic symptoms in Asthma and Peripneumony are sufficiently accounted for by the interruption to the course of the blood from the right side of the heart to the left, obstructing the influx of venous blood from the head. The natural consequence in bad cases of Asthma is Apoplexy.

"Asthma being thus occasioned by serum in the vesiculæ, may be considered as an *Hydropic Disease*; but it is obviously distinct from Hydrothorax, in which the water is collected in the sacs of the pleura, or cellular texture of the lungs. In each situation it will occasion dyspnœa, which, though subject to exacerbations, from accidental causes, will not put on the form of Periodic Asthma.

"We have sufficient testimony of the connection of Asthma with Dropsy in the histories of practical authors, frequently pointing out the intercurrence of symptoms and changes of one disease into the other, when Asthma has been of long standing: some proof of this is contained in Sect. VI. of this Inquiry.

"Hoffman and Willis have particularly noticed the hydropic appearances of the feet, and the tendency to general Dropsy in Asthma: and the observation of these authors is supported by that of other practitioners.

"Sydenham opens his treatise of the Dropsy, by stating the first symptom of that disorder, to be the swelling of the legs, and pitting of the ancle by pressure of the finger: but this is not so certain a sign in women as in men; nor even in the latter is it to be considered as an absolute certainty of the disease having commenced. He then proceeds with the following observation:

"Etenim cum senex quispiam, habitu corporis paulo pleniori præditus, "*Asthmate* jam a multis annis laborans, ab eodem derepente, idque hye- "mis tempore, fuerit liberatus, mox ingens tumor musculos tibiarum oc- "cupabit, hydropicorum tumores æmulans, qui hyeme etiam magis quam "ætate, tempestate magis pluviâ quam serenâ, pariter invalescit, et tamen "sine quovis incommodo insigniori, eundem ad libitinam usque comitabi- "tur. Quo non obstante, si generaliter loquamur, suræ et tibiæ intumes- "centes, etiam in viris, pro signo supervenientis hydropis habendæ sunt; "maxime si ita affecti spiritum ægrius ducant."

"This sagacious observer might have attributed the swelling of the legs, with great truth, to hydropic effusion in the Asthmatic, as well as in other cases; and the cessation of the Asthma when these swellings commenced, seems to corroborate, beyond dispute, the theory, that both affections depended on one cause. The swelling was larger in winter than in summer, in moist weather than in dry. Alterations in the atmosphere rapidly affect the Asthmatic, and change his habit from a perspiring to an imbibing state, and whether the aqueous collection stagnate in the vesicles of the lungs, or be

be taken up by the absorbents, and be again effused in the lower extremities, the identity of the cause is sufficiently plain.

"Insanity sometimes suspends Consumption, and Consumption Insanity: Asthma, likewise, is succeeded occasionally by Insanity; probably from the turgid state of the vessels of the head in consequence of the difficulty with which the right side of the heart propels the blood through the lungs to the left. In the hydropic diathesis, so frequently accompanying advanced Asthma, the disease of the head is still more frequent.

"The following two cases deserve attention. In one, the patient had alternately Asthma and Insanity: in the other, there appeared Anasarca and Insanity at the same time. The treatment was successful, though founded on the sole indication of curing the Dropsy.

"We conclude then, that Asthma, Insanity, and Dropsy, had the same cause; for, if Insanity and Asthma were one disease, and Insanity and Dropsy were one disease, *Asthma* and *Dropsy* must be one disease.

"From a consideration of the causes of Insanity by the learned Dr. Arnold, there can be no difficulty in assenting to the connection between these diseases."

The Author next proceeds to the investigation of the predisposing and exciting causes, and the establishing of his *four* species. He then lays down a plan of treatment for the paroxysm of each species, with general rules for the *diet* of the patients, both during the paroxysms and the intermissions.

The Appendix contains a recapitulation or synopsis of the work, with additional facts and observations in confirmation of his distinctions, and plan of treatment.

Though the stile of this work appears to us defective, we have no hesitation in recommending the matter of it to practitioners, as well worthy of their attention.

Researches, Chemical and Philosophical; chiefly concerning Nitrous Oxyde, or Dephlogisticated Nitrous Air, and its Respiration. By Humphry Davy, Superintendent of the Medical Pneumatic Institution. 8vo. pp. 590. London, 1800. Johnson.

The first of these Researches chiefly relates to the production of nitrous oxyde, and the analysis of nitrous gas and nitrous acid. "In this," says the Author, "there is little that can be properly called mine; and if by repeating the experiments of other chemists, I have sometimes been able to make more minute observations concerning phænomena, and to draw different conclusions, it is wholly owing to the use I have made of the instruments of investigation discovered by the illustrious fathers of chemical philosophy, Cavendish, Priestley, Black, Lavoisier, Scheele, Kirwan, Guyton, Berthollet, &c. and so successfully applied by them to the discovery of truth.

"In the second Research, the combinations and composition of nitrous oxyde are investigated, and an account given of its decomposition by most of the combustible bodies.

The third Research contains observations on the action of nitrous oxyde upon animals, and an investigation of the changes effected in it by respiration.

In the fourth Research the history of the respirability and extraordinary

ordinary effects of nitrous oxyde is given, with details of experiments on its powers made by different individuals."

Our recommendation will not be necessary to induce every lover of chemistry and physiology to peruse this truly philosophical work; our readers will judge of its importance by the following extracts.

Mr. D. concludes his first Research with the following general remarks on the production of nitrous oxyde. "There are no reasons for supposing that nitrous oxyde is formed in any of the processes of Nature; and the nice equilibrium of affinity by which it is constituted, forbids us to hope for the power of composing it from its simple principles. We must be content to produce it, either directly or indirectly, from the decomposition of nitric acid. And as in the decomposition of nitrate of ammoniac, not only all the nitrogene of the nitric acid enters into the composition of the nitrous oxyde produced, but likewise that of the ammoniac, this process is by far the cheapest, as well as the most expeditious. A mode of producing ammoniac at little expence, has been proposed by Mr. Watt. Condensed in the sulphuric acid, it can be easily made to combine with nitric acid, from the decomposition of nitre by double affinity. And thus, if the hopes which the experiments at the end of those researches induce us to indulge, do not prove fallacious, a substance which has been heretofore almost exclusively appropriated to the destruction of mankind, may become, in the hands of philosophy, a means of producing health and pleasurable sensation."

Respecting the decomposition of nitrous oxyde and its analysis, he draws these general conclusions. "From what has been said in the preceding sections, it appears that the inflammable bodies, in general, require for their combustion in nitrous oxyde, much higher temperatures than those at which they burn in atmospheric air, or oxygene.

"When intensely heated they decompose it, with the production of much heat and light, and become oxygenated.

"During the combustion of solid or fluid bodies, producing flame, in nitrous oxyde, nitrous acid is generated, most probably from a new arrangement of principles, analogous to those observed in Sect. II. by the ignition of that part of the gas not in contact with the burning substance. Likewise when nitrous oxyde in excess is decomposed by inflammable gas, nitrous acid, and sometimes a gas analogous to common air, is produced, doubtless from the same cause.

"Pyrophorus is the only body that inflames in nitrous oxyde, below the temperature of ignition.

"Phosphorus burns in it with the blue flame, probably forming with its oxygene only phosphoreous acid at the dull red heat, and with the intensely vivid flame, producing phosphoric acid at the white heat.

"Hydrogene, charcoal, sulphur, iron, and the compound inflammable bodies, decompose it only at heats equal to, or above, that of ignition: *probably*, each a different temperature.

"From

" From the phænomena in Sect. V. it appears, that at the temperature of intense ignition, phosphorus has a stronger affinity for the oxygene of nitrous oxyde than hydrogene; and reasoning from the different degrees of combustibility of the inflammable bodies, in mixtures of nitrous oxyde and nitrogene, and from other phænomena, we may conclude with probability, that at about the white heat, the affinity of the combustible bodies for oxygene takes place in the following order: Phosphorus, hydrogene, charcoal, iron, sulphur, &c.

" This order of attraction is very different from that obtaining at the red heat; in which temperature charcoal and iron have a much stronger affinity for oxygene than either phosphorus or hydrogene

" The smallest quantity of oxygene given in the different analyses of nitrous oxyde just detailed, is thirty-five hundred parts; the greatest proportion is thirty-nine.

" Taking the mean estimations from the most accurate experiments, we may conclude that 100 grains of the known ponderable matter of nitrous oxyde, consist of about 36,7 oxygene, and 63,3 nitrogene; or, taking away decimals, of 37 oxygene to 63 nitrogene; which is identical with the estimation given in Research I.

" Analysis and synthesis clearly prove that oxygene and nitrogene constitute the known ponderable matter of atmospheric air, nitrous oxyde, nitrous gas, and nitric acid.

" That the oxygene and nitrogene of atmospheric air exist in chemical union, appears almost demonstrable from the following evidences.

" 1st. The equable diffusion of oxygene and nitrogene through every part of the atmosphere, which can hardly be supposed to depend on any other cause than an affinity between these principles.

" 2dly. The difference between the specific gravity of atmospheric air, and a mixture of 27 parts oxygene and 73 nitrogene, as found by calculation; a difference apparently owing to expansion in consequence of combination.

" 3dly. The conversion of nitrous oxyde into nitrous acid, and a gas analogous to common air, by ignition.

" 4thly. The solubility of atmospheric air un-decompounded in water.

" Atmospheric Air, then, may be considered as the least intimate of the combinations of nitrogene and oxygene.

" It is an elastic fluid, permanent at all known temperatures, consisting of ,73 nitrogene, and ,27 oxygene. It is decomposable at certain temperatures, by most of the bodies possessing affinity for oxygene. It is soluble in about thirty times its bulk of water, and as far as we are acquainted with its affinities, incapable of combining with most of the simple and compound substances. 100 cubic inches of it weigh about 31 grains at 55° temperature, and 30 atmospheric pressure.

" Nitrous Oxyde is a gas unalterable in its constitution, at temperatures below ignition. It is composed of oxygene and nitrogene,

trogene, existing *perhaps* in the most intimate union which those substances are capable of assuming. Its properties approach to those of acids. It is decomposable by the combustible bodies at very high temperatures, is soluble in double its volume of water, and in half its bulk of most of the inflammable fluids. It is combinable with the alkalies, and capable of forming with them peculiar salts. 100 grains of it are composed of about 63 nitrogene, and 37 oxygene. 100 cubic inches of it weigh 50 grains, at 55° temperature, and 30 atmospheric pressure.

"Nitrous Gas is composed of about 56 oxygene, and 44 nitrogene, in intimate union. It is soluble in twelve times its bulk of water, and is combinable with the acids, and certain metallic solutions; it is possessed of no acid properties, and is decomposable by most of the bodies that attract oxygene strongly, at high temperatures. 100 cubic inches of it weigh about 34 grains, at the mean temperature and pressure.

"Nitric Acid is a substance permanently aëriform at common temperatures, composed of about 1 nitrogene, to 2,3 oxygene. It is soluble to a great extent in water, and combinable with the alkalies, and nitrous gas. It is decomposable by most of the combustible bodies, at certain temperatures. 100 cubic inches of it weigh, at the mean temperature and pressure, nearly 76 grains."

The third Research contains a great number of experiments on the changes produced in them, by the respiration of nitrous oxyde, and other gasses; and concludes thus:

"The experiments in the first Division of this Research, prove that nitrous oxydes when respired by animals, produce, peculiar changes in their blood and in their organs, first connected with increased living action; but terminating in death.

"From the experiments in this Division, it appears, that nitrous oxyde is rapidly absorbed by the circulating venous blood, and of course its condensed oxygene and nitrogene distributed in the blood over the whole of the system.

"Concerning the changes effected in the principles of the impregnated blood during circulation and its action upon the nervous and muscular fibre; it is useless to reason in the present state of our knowledge.

"It would be easy to form theories referring the action of blood impregnated with nitrous oxyde, to its power of supplying the nervous and muscular fibre with such proportions of condensed nitrogene, oxygene and light, or etherial fluid, as enabled them more rapidly to pass through those changes which constitute their life; but such theories would be only collections of terms derived from known phænomena, and applied by loose analogies of language to unknown things.

"We are unacquainted with the composition of dead organised matter; and new instruments of experiment and new modes of research must be found, before we can ascertain even our capabilities of discovering the laws of life."

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The laſt Reſearch, which is by far the moſt important to the practitioner, details the effects produced on the human frame, by the reſpiration of nitrous oxyde and other gaſes. For theſe we muſt, at preſent, refer to the Work itſelf.

The Doctrine of Phlogiſton eſtabliſhed, and that of the Compoſition of Water refuted: by Joseph Priestley, LL.D. F.R.S. &c. &c. 8vo. pp. 90, 1800. London, Johnſon.

It is inconſiſtent with our plan to enter into theoretical diſcuſſions which are not immediately connected with the healing art. Whether the truth lie on the ſide of Dr. P. or his opponents, we cannot determine; but we believe that the tide runs ſo forcibly at preſent in favour of the Antiphlogiſtic doctrines, that chemiſts had rather be carried away by it, than be at the trouble of ſtemming the current, even for the ſake of arriving at the harbour of truth.

Dr. P. examines the calcination and reduction of metals, the decompoſition of water, the conſtitution of fixed air, and azote, from all which he draws inferences in favour of the exiſtence of Phlogiſton.

A Practical Treatiſe on the Efficacy of Stizolobium, or Cowhage, (the Dolichos Pruriens of Linnæus) internally adminiſtered, in Diſeaſes occaſioned by Worms. To which are added, Obſervations on other Anthelmintics of the Weſt Indies. By William Chamberlaine, Surgeon, Fellow of the Medical Society of London, 8vo. pp. 90. London, Printed for the Author, No. 29, Aylesbury Street, Clerkenwell.

We think this practical work well worthy the attention of practitioners: It contains a ſufficient number of caſes to prove the efficacy of the remedy, as well as the ſafety with which it may be adminiſtered.

Critical Survey of the lateſt Theories on difficult Dentition in Children.

[Continued from pp. 171—177 of our laſt.]

Notwithſtanding theſe authorities, it will appear by the following obſervations, how little it deſerves to be depended upon, and how far it is from being capable of removing thoſe affections, which befall the infantile age in the period of teething.

1. It ſeems very improbable, and almoſt ridiculous to imagine, that, by this ſimple operation, the growth of the teeth ſhould be promoted in a few days, to which otherwiſe ſeveral months are required.

2. It has been ſtated, that convulſions have actually ceaſed after performing that operation; but could not its effect be thus explained, that they were removed by its having cauſed an irritation in another part of the body, and acted in a ſimilar manner as we obſerve bliſters, ſcarifications, and artificial ulcers, applied for the ſame purpoſe?

3. As it is frequently the caſe, that more teeth than one are preparing to penetrate, it is difficult to determine which protuberance is to be cut through.

4. The ſucceſs of the operation depends in a great meaſure on the critical time when it ſhould be undertaken, which is often impoſſible to determine. Van Swieten adviſes, therefore, not to perform it for fear of loſing credit, as he relates a caſe where the tooth did not appear till two months after the operation.

5. By the experience of eminent phyſicians and ſurgeons, it has been found not only of no avail, but rather hurtful in ſome caſes. Platner (Inſtitutiones Chirurg. § 1078) adviſes not to undertake the operation, for fear of hurting the teeth. Schaeffer obſerves, in his tranſlation of Armſtrong, that only in a few caſes it ſeemed to have effect, but in two others it proved unfortunate. Deſſault and Gavand, (Traité d'Oſteologie) confeſs, that it has been performed without ſucceſs. Dr. Selle and Dr. Tade, two phyſicians of known merits, caution every body againſt it, becauſe they think that the wound, by healing and cauſing a ſcar, will render the piercing of the teeth more difficult. Dr. Starke, Profeſſor and an eminent practitioner at Jena, and Dr. Hecker, are likewiſe antagoniſts of the operation.

The application of leeches behind the ear is another remedy, whoſe infallibility in difficult dentition was highly praiſed by Le Roy, (in Eſprit des Journaux, 1784, where he ſays of it, "C'eſt donc un grand moyen de population, qu'une ſangſue derniere l'oreille des enfans") though it was recommended before him by Harris, (de morbis infantum); but it has been now much left off, and only kept its reputation againſt difficult dentition when another diſeaſe was miſtaken for it and accidentally cured. The ſame may be ſaid of other general remedies, which are likewiſe efficacious in other diſeaſes, but which poſſeſs no particular power againſt difficult dentition, as bliſters, &c.

Having given the arguments againſt difficult dentition, it may be proper to add ſome general reflections on the ſubject.

1. If any danger could be ſuppoſed to ariſe to children from the growth of bones, and if Nature did not prevent any morbid affections, or ſurmount any difficulties by proceeding always gradually in the formation of the body, dangerous ſymptoms might be much ſooner expected from the growth of the ſkull, particularly when the ſutures are forming, becauſe the dura mater and the pericranium are more ſenſible than the ſoft ſpungy gingiva; and even the growth of the nails might more eaſily be ſuppoſed the cauſe of thoſe ſymptoms, on account of the great ſenſibility of the neighbouring parts: but nobody ever conſiders them as cauſes of morbid infantile affections.

2. There is nothing analogous in the economy of the human body, or which had any ſimilarity with difficult dentition, wherein by a gradual and natural growth diſeaſe is produced. The growth of other bones would as certainly excite pains and dangerous ſymptoms, if it was ſudden or very quick; which being anomalous,

lous, is never ſuppoſed to be the caſe; and pains are not even perceived in ſome diſeaſes of the bones, in curvatures of the back-bone, or when teeth grow in a preternatural direction.

3. If the growth of teeth were able to cauſe ſuch very dangerous ſymptoms, it may be ſuppoſed, that triſmus would be particularly brought on, as it is ſo common to children; but this is only obſerved in the firſt days of life.

4. Pains ariſing from double teeth cutting through in adults, are not to be compared with dentition in children, becauſe this is preternatural and anomalous. It is with more difficulty ſuch a tooth can get through, becauſe the place which it is to occupy, is more contracted, and partly filled with the neighbouring teeth, and beſides this, the gums are not ſo ſoft and yielding as they are in a child.

5. There is no analogy between the pains ſuppoſed to be occaſioned by difficult dentition and thoſe ariſing from a caries dentium, becauſe a true inflammation ſpreading to the neighbouring parts takes place here, which originates from the nerve of the teeth being affected. Carious teeth never produce ſuch general ſymptoms, even in children, as are derived from difficult dentition; every affection remains local here, and only a little fever, or a want of appetite comes on, as is the caſe in every pain. Is it now probable, that a difference of a few years would leſſen the irritability ſo much, that, for inſtance, a child of ſix years ſhould not be attacked with convulſions from a viſible and painful affection of a tooth; whereas, it is ſuppoſed to ſuffer them at the age of one or two years from an inviſible and ſuppoſitious cauſe?

Dr. Wichmann concludes his paper by obſerving, that even if he had not ſucceeded in proving the non-exiſtence of difficult dentition, he ſhould think himſelf ſatisfied if he could but convince practitioners not to attribute too much to dentition; that this was not aſſigned as the only cauſe for all diſeaſes of children, obſervable at the time of dentition; and that it may not be neglected to point out and ſearch other cauſes, before they are derived from dentition.

Such is the opinion of Dr. Wichmann; on which we ſhall ſubjoin, (in our following Number) a few Obſervations, ſtating how far it is to be reſtrained or admitted.

Bemerkungen; i. e. Remarks on the Brunonian Practice; by D. Christ. William Hufeland, Profeſſor of Medicine at Jena, Vol. I. 1799, pp. 127, 8vo. Tubingen, Lotta.

The name of Profeſſor Hufeland has acquired ſo much celebrity, even in this country, as naturally to excite the curioſity of every medical man, to know the opinion of this great practitioner, on a ſyſtem of medicine which has of late gained ſo much ground amongſt phyſicians, and has been particularly received with applauſe on the continent. Mr. Hufeland had already communicated his judgment on it, in ſeveral numbers of his Practical Journal; but we find his ideas all united here, though, except in a few

inſtances, unaltered. In *the Introduction*, he confeſſes himſelf to be, on the whole, an antagoniſt of this new ſyſtem, in which but few ideas meet with his approbation, except ſuch as had been received before Brown, by every reaſonable practitioner. But, the chief object of this publication is, to caution young practitioners againſt indiſcriminately applying in practice the raw principles of Brown's theory, ſeduced by its apparent ſimplicity and conſiſtency. The manner, he proceeds, in which ſome enthuſiaſts attempted to introduce the Brunonian practice, by which they aimed at nothing leſs than a revolution in medicine; the ſpirit of faction which is thereby excited, is by no means calculated to forward ſcience. It lies indeed, in the nature of things, that the erroneous principles and doctrines of Brown's theory will be ſupplanted in time; but they may leave a dangerous tendency to faction and diſcord, which is very prejudicial to truth and knowledge, and apt to lead to partiality, which checks the mind in inquiry. This ſyſtem proceeds but from one point of view, that of incitability, and deems all auxiliary knowledge, anatomy, chemiſtry, &c. ſuperfluous. *The introduction* concludes, that the Brunonian ſyſtem is full of inaccuracies and ſophiſtry, and has too many chaſms to deſerve the name of a ſyſtem: Pure Brunonianiſm will produce daring phyſicians, not underſtanding how to manage Nature, but continually tyranniſing over her. Againſt theſe introductory premiſes, may be replied by the well-wiſher of that ſyſtem, that, if its principles are allowed to be theoretically conſiſtent and juſt, their not proving ſo in practice is to be derived from their being miſunderſtood and miſapplied, which, conſequently, cannot be conſidered as a fault of the ſyſtem, but rather as a fault againſt it. Its imperfection can be no objection; this it ſhares with all ſyſtems, by which Nature is regulated. However, it excels all other, by fixing only one point of view, and avoiding a perplexing multiplicity; farther, it may be ſuggeſted, that ill conſequences ſuppoſed to originate from the Brunonian method of treatment, are partly exaggerated, partly groundleſs, if this is built not upon the mere literal ſenſe, but upon its true genius, a circumſtance which deſerves to be well weighed and diſtinguiſhed. Incitability is by no means the only point of view in this ſyſtem; and the extenſive claſs of topical diſeaſes, leaves great room for mechanic action and chemiſtry. The ſtudy of the auxiliary branches of medicine, is not at all rendered ſuperfluous by it, as the celebrated *Frank*, of Vienna, has ſufficiently demonſtrated. How far this general apology for the Brunonian ſyſtem is able to remove the above imputations, we muſt leave undecided, as this would neceſſarily lead us farther into the ſubject than the limits of this Journal will admit. It may ſuffice to remark, that many antagoniſts of that ſyſtem, who attempted to ſhow its errors and inſufficiency, have ſometimes hurt their own cauſe, by not having ſufficiently ſtudied and entered its genius. Whether this is the caſe here, we leave out readers to judge, by repreſenting to them briefly, the contents of this publication, to which the bounds of

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the Medical Journal will only allow us to add, now and then, ſome remarks, which can be brought forward on the ſide of the Brunonian theory. The contents accordingly, are delivered under eleven different heads: 1. *Practical point of view.* In the examination of a ſyſtem, it is not of ſo much conſequence, whether it poſſeſſes a logical conſiſtency, but whether it alleviates and improves the cure of diſeaſes; and many ſyſtems have been forſaken, on account of this diſharmony with the practice. 2. *Diagnoſis of diſeaſes* is but ſeemingly rendered eaſier by Brown's theory; for the ſymptoms of a ſthenic ſtate often occur in aſthenic diſeaſes, and vice verſa. Brown commits, beſides, the fault of conſidering the names of diſeaſes ſufficient to diſtinguiſh whether they are ſthenic or aſthenic. Moreover, the diſtinction of direct and indirect debility, is ſubject to many difficulties, and often quite impoſſible; for inſtance, in ſpeechleſs perſons; and ſometimes ſuch cauſes have preceded, that may produce as well one ſtate as the other, which muſt of courſe perplex the Brunonian phyſician, or oblige him at leaſt to ſtate a mixed debility, in which exiſts at the ſame time, want and ſuperabundance, a ſtate quite contradictory in itſelf, which requires alike the moſt powerful and the weakeſt ſtimuli. Finally, it is very often impoſſible to find and determine the degree of incitation, and the proper remedy for it. Every thing depends on a cautious experiment; and the pretended mathematical certainty of the Brunonian theory is but a phantom. To this will be probably objected, that ſthenic and aſthenic ſymptoms are not only attended to in this ſyſtem, but that, alſo, a chief point of it conſiſts in determining whether a diſeaſe is topical or general; and as the preſent phenomena of a ſthenic and aſthenic ſtate are often uncertain and fallible, it is particularly urged by this ſyſtem, to look back to the preceding influences and morbific diſpoſition for determining the diagnoſis. 3. *The two ſpecies of death.* Prof. H. thinks it inconſiſtent with experience, that according to this ſyſtem, there are but two paths to death, by direct and indirect debility: there exiſts a third, in the unfitneſs or deſtruction of vital organs, where neither the aſthenic nor ſthenic method is of any avail. However, the Brunonian will refer here to the above proximate cauſe, either by conſidering the loſs of ſuch an organ as the want of a ſtimulus neceſſary for life, or as a ſtate primarily originating from direct or indirect debility, &c. 4. *Action of medicines.* It is a chief principle of the Brunonian theory, that the action of remedies depends ſolely on gradation, or the degree. However, its followers often combine indiſcriminately, remedies of different degrees, viz. bark and ſeneka. Now, if the degree of incitement requires bark, it ought to be given alone; for ſeneka being a weaker ſtimulus, cannot add to its power, nor diminiſh it, as it is itſelf an exciting remedy: the uſe of ſuch a combination is, however, proved by experience. In this manner, the Brunonian is obliged to act, inconſiſtent with his ſyſtem, and ſilently to allow caſes, where a ſpecific difference of the ſtimuli and their chemical action take place. As inſtances of a mere mechanic and chemical action, the uſe of oil in inflammations, of alkali in gout,

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of citric acid in ſcurvy, is adduced. But the gradual difference of remedies in their action, muſt be only underſtood as far as they act upon incitability in general, but not on the individual ſtate of a ſingle organ, where different laws take place. With reſpect to the combination of different remedies, it may be ſaid, that this apparent inconſiſtency depends on our imperfect knowledge of the relative and abſolute powers of medicines, and of the preſent ſtate of incitation; and accordingly, in caſes where even a cautious experiment is not allowed, recourſe muſt be had to a combination of remedies, which experience has found to produce the neceſſary degree of incitation. The mechanic uſe of oil in inflammations is by no means denied by Brown's theory, and alkalies might be ſuppoſed not to act as ſtimuli, if they cured nothing but the gout, and if this was only cured by them. The uſe of citric acid, though ſeemingly a weakening medicine, may, in a high degree of ſcurvy, be in the ſame way explained, as the uſe of ice in frozen animals. 5. *Unequal diſtribution and action of vital power.* Under this title, Mr. H. enters into an enquiry of the ſthenic and aſthenic method, as a baſis of the Brunonian theory; and attempts to ſhow, how repugnant this is to reaſon and experience. The different parts of the body poſſeſs different degrees, and ſpecific different modifications for irritaments; as theſe act either only upon one part, or in different degrees upon all, and produce conſequently, in one, a ſthenic, in another an aſthenic ſtate. This ſeems to be confirmed by experience in nervous fevers and pulmonary conſumptions; where, in the firſt caſe, active inflammations ſometimes occur, requiring moderate bleeding and antiphlogiſtics, when the general treatment conſiſts in keeping up the nervous power by valerian, camphor, &c; in the latter, ſmall venæſections often contribute to prolong the life of the patient. May it ſuffice to ſuggeſt here, that according to Brown, both ſtates are not entirely denied to co-exiſt in different parts of the ſame organiſms, and that there is no ſpecific irritament, which does not prove for the whole conſtitution either aſthenic or ſthenic. The inſtances beſides adduced by Mr. H. are doubtful, and even not admitted by ſome Non-Brunonians. 6. *Action of cold and warmth.* Prof. H. diſcuſſes, in a dialogue between himſelf and a friend of the Brunonian ſyſtem, the queſtion, whether cold has a weakening, and warmth a ſtrengthening effect upon the body. He propoſes ſeveral arguments to prove, that this expreſſion is very relative and unſettled; that warm baths are known to render the pulſe ſlow; that inflammatory diſeaſes occur oftener in winter than in ſummer; in ſhort, that ſtrengthening and weakening are ideas too relative, to be able to aſcertain whether any thing is weakening or ſtrengthening; that cold has, beſides, an aſtringent quality, &c.; in ſhort, the contrary of this Brunonian principle may with the ſame reaſon be aſſerted. How far theſe and ſimilar arguments may appear ſatisfactory to a Brunonian, is eaſily conceived. 7. *Application of cold and warmth.* Prof. H. relates here, the caſes and circumſtances at large, in which both may be uſed as ſtimuli, as ſtrengthening and weakening remedies, according

according to what we find recorded by experience. Some of these seem indeed contradictory to Brunonian principles, or would at least, with difficulty be explained after them: however, a Brunonian will not be at a loss to extricate himself. 8. *Hæmorrhagies.* There are not only passive or asthenic, but likewise active or sthenic hæmorrhagies, originating from an increased action or local irritation, either idiopathic or consensual, which require weakening remedies, antispasmodics, &c. 9. *Direct and indirect debility.* The notion of two forms of debility from increased or diminished irritability, was entertained long before Brown received and influenced the practice; but it is erroneous to derive them, with him, from the different action of irritaments. In support of this, Prof. H. brings forth several arguments; viz. that the same causes produce quite contrary species of debility; that often a vicissitude of both species of debility occurs in the same individual, without the least change in the external influences; in short, that Brown's distinction of direct and indirect debility has no practical use. 10. *Topical and general diseases.* The division of diseases into topical and general, already adopted by Galenus, is by no means calculated to improve the practice, because no certain mode of treatment can be built upon it, as there are topical diseases, the causes of which lie in the general constitution; viz. scorbutic ulcers, &c. as general diseases are often cured by topical remedies, blisters, purgatives, &c. The division into idiopathic and consensual diseases, seems therefore, by far preferable. By this it appears, that Prof. Hufeland has not quite entered into the notion which Brown has of topical diseases, which is different from what has been stated here by him. 11. *Necessary retrospect to the state of the organic as well as morbid matter.* This circumstance seems to be utterly neglected by Brown, by only adopting the notion of incitation and incitement. However, many diseases do not depend on the degree of incitation, but on the chemical difference of organic materia, because, it would be otherwise inconceivable, why debility could produce as well scurvy as gout; why alkali is hurtful in the latter, and useful in the former. Remedies do not therefore merely act as irritaments, but they cause also a change in materia. The whole is concluded with some cases, as additional arguments against the fashionable practice: Such are the objections of Prof. Hufeland. The plan of this Journal will excuse us for not having reviewed them more at large; and we only beg leave to add, that though the above arguments show the ingenuity of their author, yet they will not be deemed sufficient by the Brunonian, to subvert the system against which they are intended.

Apologie, &c. i. e. Apology for the Brunonian System of Medicine, grounded upon Reason and Experience. Edited by D. Charles Werner, Physician in Austria, Vol. I. pp. 314, 8vo. Vienna, Wappler and Beck.

The tendency of this publication is intimated upon the title, and the author informs us in the Introduction, that it is intended to defend Brown's doctrine, and confirm it by facts; a doctrine which he

he pretends to be, notwithſtanding all its excellencies, ill uſed by its antagoniſts. For this end, he invites all thoſe who believe in it, to ſupply him with communications tending to the purpoſe. In the inquiry, however, upon medical ſubjects, it ſhould be with every body a conſtant rule, not to proceed from any theory whatever, particularly if it is ſtill ſubject to doubts and objections. But this the author ſeems to have entirely neglected, by only admitting into his book, ſuch contributions which appear conſiſtent with Brunonian principles; and how little this partiality is able to promote truth and real knowledge, needs no farther demonſtration. It contains *ſome remarks on Brown's theory, a ſketch of the ſyſtem, and relations of ſeveral diſeaſes and caſes*; but on the whole, not any new idea or arguments in ſupport of it; and though it cannot be denied, that, now and then, an intereſting obſervation is met with, this cannot, however, induce us to wiſh, that the author ſhould continue a blow, for which he ſeems not altogether calculated.

Mr. Scarpa, on the Structure of the Bones.

This celebrated anatomiſt, whoſe great merits and diſcoveries in the fineſt parts of anatomical reſearches are generally acknowledged, has again given a proof of his great abilities and inquiſitive genius, by a publication that appeared laſt year at Leipſic, entitled *De Penitiori Oſſium Structura Commentarius*, 55 pages in 4to. ſplendidly printed, with three plates elegantly engraved. The common opinion hitherto prevailing amongſt anatomiſts was, that bones conſiſted of fibres, plates, or laminæ, lying in different ſtrata one upon another; but this only appears ſo in the bones of children, which, though *improperly*, may be ſaid to be formed of fibres and plates; for, on examining them through a microſcope, they are obſerved to be reticular and ramifying amongſt themſelves; it may therefore generally be aſſerted, that all bones are of a reticular and cellulous texture. To know whether the moſt ſolid, compact, and, as it were, ſtony part of a bone were cellulous, Mr. Scarpa proceeded both in an analytic and ſynthetic way. In repeating Haller's experiments on the incubation of eggs, he diſcovered by the help of a microſcope, in the thigh and ſhin bones, the fineſt reticular texture, which firſt appeared wrinkled, but on the 14th day it repreſented itſelf quite reticular, cellulous, and twiſted like cotton. This he obſerved likewiſe in the bones of an embryo of 28 lines in length. For the analytic inquiſition, he put a human bone into diluted muriatic acid. The earth being diſſolved, and the acid waſhed out, it was macerated in water, and became a woolly reticular texture. The meſhes and interſtices of it are larger in flat and broad bones than in the round ones, cloſer where the bones are compact, and looſer where they are leſs ſolid. The fineſt ſtructure has accordingly a great likeneſs to that of the ſkin. The cellular ſtructure of the bones is particularly obſervable in whales, dolphins, ſharks, and other fiſhes. The following experiments ſeem likewiſe to contradict the common opinion of the laminous

laminous ſtructure of the bones: He deſtroyed the ſhin bone of a dog, and forty days after the external rind of it was changed into a ſpongy ſubſtance of the thickneſs of 6 lines, which is the ſame caſe in mortification of bones, where nature ſurrounds the dead end of it with a thick bony ſponge, only by expanding and widening the outer cruſt of the bone. A ſimilar circumſtance happens in the *mollities oſſium* in children, where the bones receive the ſame ſpongy appearance as if they were laid in muriatic acid. A topical morbid mollification is ſometimes obſerved in bones, by which they are changed into a fleſhy maſs, very vaſcular and eaſily bleeding, which evidently ſhews an analogy with common *tela celluloſa*, forming a ſimilar fleſh in ulcers. It is very ſtriking how ſoon the bones of birds produce a ſpongy cotton-like texture when deprived of the perioſteum; "viſu mirabile eſt, in avibus quanta celeritate ex oſſibus de induſtria perioſtes nudatis, mollis caruncula propullulat; ſanguiferis vaſis plurimum referta, quæ porro in cartilaginem primum, mox intenuiſſimum quoddam oſſeum goſſypium ſubtiliter cum extus tum intus reticulatum convertitur." The bones poſſeſs a greater quantity of veſſels than is generally believed, but thoſe that penetrate into them by the *pori Haverſii* do not proceed in a ſtraight direction, but form nets in the internal ſubſtance; they are likewiſe provided with nerves, though theſe cannot be anatomically demonſtrated on account of their ſubtility and cloſe ſituation to the veſſels; but it is ſhown, by experience, that the young fleſh ſhooting out of wounds of the bones is poſſeſſed of great ſenſibility. The external plate of the flat bones of the ſkull appears like diploë, when its internal lamina is already quite ſolid. The formation of cavities in bones ſeems to proceed in a mechanic way, by the hardening of the rind.

MEDICAL AND PHYSICAL INTELLIGENCE.

Prof. Abildgaard on Reſpiration.

PROFESSOR ABILDGAARD, of Copenhagen, has made ſeveral experiments on reſpiration, the reſults of which ſeem to be quite in oppoſition to the generally prevailing theories on this ſubject. Although they are not ſo perfect and extenſive as to ſubvert entirely the common theory, yet they deſerve the attention of every phyſiologiſt, and may contribute to a re examination of ſeveral phænomina of reſpiration, which have been hitherto, by no means, ſatisfactorily explained. 1. It has, in general, not been ſufficiently regarded how ſmall the quantity of air is inſpired at every breath, which, according to his experiments, does not exceed three cubic inches, a portion of air only ſufficient to fill the wind pipe (arteria aſpera). It appears, therefore, that at every reſpiration the air contained in the arteria aſpera is only renewed, but that the air in the veſicles and cells of the lungs is accordingly very ſlowly replaced by freſh air. However, a want of breath, or renewed air, only laſting a few minutes, is able to kill animals, which does not ſeem to correſpond with this phenomenon. 2. Experience ſhews that the retention of breath cauſes the ſame uneaſineſs and inconveniencies after inſpiration as after expiration; though, according to theory, it ſhould be eaſier to retain the breath after inſpiration. 3. The wind-pipe was opened in two dogs, and by a convenient apparatus, azotic gas injected into the lungs of one, and oxygen gas into thoſe of the other; and after the lungs ſeemed thereby perfectly extended, a ligature was applied to their wind-pipes. Both dogs felt the ſame painful ſenſation in the attempt of gaſping for breath, and there was no difference perceived except that the latter lived eleven minutes, whereas the former died in five. The movement of the heart ſtill remained for ſome time viſible in both after the breathing had ceaſed. The queſtion now is, why both animals attempted to breathe with equal ſenſation of pain and uneaſineſs, though one had the moſt ſalubrious air in the lungs? and why did they die before the movement of the heart, and conſequently the circulation had ceaſed? 4. It has been obſerved by repeated experiments, that animals being in a ſtate of aſphyxia, and brought to life again by air being injected into their lungs, did not catch breath before the heart began to beat; if, therefore, the motion of the heart is ſuppoſed to ceaſe from want of oxygen, why does it beat in this caſe, before breathing is re-eſtabliſhed? 5. Air drawn from the lungs of a dog killed by a ligature of the wind-pipe, was found to contain a portion of oxygen, and yet the dog died for want of breath, which ſeems contrary

contrary to the common opinion of the uſe of oxygen, &c. Prof. Plaff, of Kiel, remarks, in oppoſition to theſe experiments, that No. 1, is inconſiſtent with other experiments made on this ſubject by Robert Menzies (in his Tentamen Phyſiologicum de Reſpiratione) with the greateſt exactneſs, as it ſeems, according to him, forty-three cubic inches are always inſpired at once. They do not likewiſe correſpond with the experiments of Lavoiſier, Abernethy, and Goodwyn, as, according to the latter, about ten cubic inches of vital air, (oxygen gas,) and nearly forty cubic inches of atmoſpheric air, are breathed in at every reſpiration. The difference between theſe experiments and Prof. Abildgaard's is conſequently too great, and ſome inaccuracies muſt have been committed on one ſide or the other. It is therefore to be wiſhed, that Prof. A. would relate his experiments at large, to enable us to judge to which of them credit is to be given. The obſervation in No. 3, is indeed intereſting, but could not the ſame painful gaſping for breath in the dog, whoſe lungs were filled with oxygen gas, be derived from the preternatural extenſion of them, and the mechanical impediment cauſed thereby in the circulation of the blood? the ligature itſelf may have had ſome influence here. Beſides, it is probable that the carbonic acid evolving itſelf in the lungs extended by oxygen gas, may have produced the ſame phenomena in this dog as the mephitic air in the other, particularly as we know that a mixture of air, in which oxygen gas is preſent, may become fatal by an additional quantity of carbonic acid; and this likewiſe explains why the animal (No. 5) died, though the air in its lungs contained a portion of oxygen gas. The previous motion of the heart (No. 4) before reſpiration was perceived, may, notwithſtanding, be owing to the oxygen entering the lungs with the injected air, which ſtimulated the heart previous to the re-eſtabliſhment of reſpiration. *(See Northern Archives of Medical and Natural Science, by Prof. Plaff and Dr. Scheel, Vol. I. No. 1. in German.)*

Method of obtaining Sugar and Brandy from the Beet Root.

The committee for examining Mr. Achard's mode of fabricating ſugar, conſiſting of the moſt reſpectable chemiſts at Berlin, has now, by order of the King of Pruſſia, publiſhed an inſtruction, containing the method of making that indigenous ſugar, of which the following is the moſt eſſential:—The beet roots beſt calculated for the extraction of ſugar, are thoſe which have a ſoft fleſh, whitiſh towards the edges, and not growing above ground. After being cleaned, they are boiled, cut into pieces, and pounded in a wooden trough with wooden ſtampers, and afterwards preſſed. The juice thus obtained is immediately put into a poliſhed copper kettle and ſimmered, during which time the ſcum appearing on its ſurface muſt continually be taken off. To one hundred quarts of this juice, two ounces or leſs of ſlacked lime, diluted ſo as to have the appearance of milk, are added, and the boiling continued till the juice is thickened to the half of it. Having ſtrained it through a woollen

a woollen cloth, it is thickened in a poliſhed copper veſſel, or, which is better, in a tin veſſel, to the conſiſtency of a ſyrup, which afterwards is put into glaſs, ſtone, or wooden veſſels. Theſe being placed near a moderate fire, ſaccharine cryſtals appear, which being freed by expreſſion from the mucilaginous juice, a very good raw ſugar is obtained, which muſt now be left to the refiner.

For the preparation of brandy, the water uſed in the firſt boiling of the roots, is boiled again, and poured on the reſiduum from the firſt expreſſion of the pounded roots; this muſt ſtand for a day or two, after which it is expreſſed, and the remaining dry pulp ſerves as a good food for cattle. The juice obtained in this way is mixed with the waſte parts of the ſyrup and the mucilage which remains after the expreſſion of the ſaccharine cryſtals, and all boiled together till half of it is evaporated. The liquor is then poured into a coop expoſed to a temperature of 45° Fahrenheit, and cooled to 65°. Having added a proportionate quantity of yeaſt, it is left to ferment, and in three or four days after the diſtillation is undertaken. The taſte and ſmell of turnips are removed by the addition of well-burned pulveriſed charcoal; but the brandy thus obtained has a great deal of the flavour of rum. According to the experiments made by the Committee, 15 quintals of beet-root afforded 57½ lb. of raw ſugar and near five gallons of brandy.

We have authority to announce the following Medical Lectures.

ST. THOMAS'S AND GUY'S HOSPITALS.

The Lectures for the enſuing Seaſon will commence at theſe united Hoſpitals in the following order:—

Theatre, St. Thomas's Hoſpital.

Anatomy and Surgery, on Wedneſday, October 1, at one o'clock, by Mr. CLINE and Mr ASTLEY COOPER.

Theatre, Guy's Hoſpital.

Theory and Practice of Medicine, on Friday, October 3, at ten in the morning, by Dr. BABINGTON.—Midwifery, and Diſeaſes of Women and Children, on Saturday, October 4, at eight in the morning, by Dr. LOWDER and Dr. HAIGHTON.—Chemiſtry and Experimental Philoſophy, on the ſame morning at ten, by Dr. BABINGTON and the Rev. Mr. ROBERTS.—Phyſiology, or Laws of the Animal Economy, on Monday, October 6, at a quarter before ſeven in the evening, by Dr. HAIGHTON.—Therapeutics and Materia Medica, on Thurſday, October 9, at ſeven in the evening, by Dr. CURRY.—Principles and Practice of Surgery, on Monday, October 13, at eight in the evening, by Mr. ASTLEY COOPER.——Mr. COOPER will alſo deliver a Courſe of Lectures on Select Surgical Caſes in the Hoſpital.

In addition to theſe, early in October, a Courſe of CLINICAL LECTURES will be begun by Dr. SAUNDERS and Dr. BABINGTON, and continued through the Seaſon on the following plan:

The

The moſt intereſting Caſes will be ſelected from among the whole number of Medical Patients admitted into the Hoſpital.

As ſoon as poſſible after admiſſion, a Hiſtory of the Caſe will be taken down at length; in which will be deſcribed the Patient's age, temperament, occupation, and condition in life; the date and progreſs of the complaint; the actual or probable cauſes giving riſe to it; the medicines, if any, already employed, and the effects they have had; together with the ſymptoms preſent, whether collected from the Patient's feelings, or cognizable by the Phyſician. There will alſo be given a daily Report, ſpecifying the remedies preſcribed, their ſenſible effects, and the changes which take place in the diſeaſe. Every Thurſday evening, at eight o'clock, a Lecture will be delivered upon the moſt important caſes; in which the ſymptoms of each will be examined, the leading and eſſential ones pointed out, and the diſeaſe referred to its proper place in the beſt Syſtems of Noſology. A comprehenſive view will be taken of the plan of cure to be followed in ſuch caſes; the ſeveral indications will be laid down; and the particular circumſtances, either originally belonging to the caſe, or ariſing during its progreſs, and which may render a deviation from the general plan neceſſary, will be ſpecified. The ordinary and expected effects of the remedies preſcribed will be mentioned; their operation diſtinguiſhed from the conſequences of the complaint; and any new or unuſual reſult from them will be carefully noted, and, as far may be, accounted for. The ſymptoms that portend a favourable event, or the contrary, will be marked as they occur, and connected with the previous circumſtances, in order to aſcertain the dependance of the one upon the other, and afford data upon which to ground an early and correct prognoſtic. Laſtly, where the termination is fatal, and the caſe is ſuch as to be elucidated by examination of the body, this will, if poſſible, be effected, and a full account given of the morbid appearances. In ſhort, throughout the whole Courſe, the great object will be to unite Theory with Practice, to verify general precepts by individual examples, and thereby to give a connected and ſyſtematic view of the Hiſtory, Nature, Cauſes, and Cure of Diſeaſe.

CONDITIONS.

1. Clinical Pupils to pay five guineas for the Courſe, which will commence in October, and end in May; the firſt four months to be conducted by Dr. Saunders, the next by Dr. Babington.

2. No perſon to be accepted as a Clinical Pupil, who is not intitled to attend the Lectures on the Practice of Medicine during the time the Clinical Courſe will continue.

3. Clinical Pupils to have the privilege of going into the Clinical Wards only, unleſs they are likewiſe Pupils either to the Phyſicians or Surgeons of the Hoſpital; and then only during Hoſpital hours.

4. Gentlemen entering to the Phyſicians as perpetual Pupils, or for twelve months, to have the benefit of the Clinical Lecture without additional expence.

TERMS

TERMS of attending as PHYSICIANS PUPILS.

For ſix months, 10 guineas.—For twelve months, 15 guineas.—Perpetual, 21 guineas.

The following Lectures will commence at the London Hoſpital on the 1ſt of October: On the Theory and Practice of Phyſic, by Dr. COOKE; on Chemiſtry, by Drs. HAMILTON and FRAMPTON. The Clinical Lectures, by Drs. COOKE, HAMILTON, and FRAMPTON. The Anatomy, Phyſiology, and the Principles and Operations of Surgery, by Mr. BLIZARD and Mr. T. BLIZARD. The Anatomical Demonſtrations by Mr. HEADINGTON.

THEATRE of ANATOMY, Great Windmill Street.

Mr. WILSON will commence his Courſe of Lectures on Anatomy, Phyſiology, Pathology, and Surgery, on Wedneſday, the 1ſt of October, at two o'clock.

A Room is likewiſe open for Diſſections, under the direction of Mr. WILSON and Mr. THOMAS, from nine o'clock in the morning till two in the afternoon, from the 10th day of October till the 20th of April; where regular and full demonſtrations of the parts diſſected are given; where the different caſes in Surgery are explained, the methods of operating ſhewn on the dead body; and where alſo the various arts of injecting and making Preparations are taught.

Dr. FORDYCE will commence his Autumnal Courſe of Lectures on the Practice of Phyſic, Materia Medica, and Chemiſtry, at his houſe in Eſſex-ſtreet, Strand, on Monday the 6th of October, at eight o'clock in the morning.

Dr. PEARSON's Lectures on Phyſic and Chemiſtry will commence the firſt week in October next, at the Laboratory in Whitcomb-ſtreet, Leiceſter-ſquare. The Lectures on the Materia Medica and Practice of Phyſic are delivered every morning, from a quarter before eight to a quarter after nine, and on Chemiſtry from a quarter after nine to ten. Lectures on the Caſes of Hoſpital Patients are alſo given once a week.

Dr. CRICHTON will commence his uſual Autumnal Courſe of Lectures on the Theory and Practice of Phyſic, Chemiſtry, and Materia Medica, on Monday, October 13, at his houſe in Clifford-ſtreet, Bond-ſtreet, at eight and nine o'clock in the morning.

Dr. BRADLEY will commence his Autumnal Courſe of Lectures on the Theory and Practice of Medicine, on Monday, October 6, at the Lecture Room, No. 102, Leadenhall-ſtreet, at ſix o'clock in the afternoon.

Dr. OSBORN's and Dr. CLARKE's Lectures on Midwifery and the Diſeaſes of Women and Children will be given the following winter,

winter, as uſual, only at Dr. Clarke's houſe, No. 1, in New Burlington-ſtreet. The Courſe will begin on the firſt Monday in October next, at half paſt ten o'clock.

Dr. DENNISON and Dr. SQUIRE, on Wedneſday, Oct. 1, will begin a Courſe of Lectures on the Principles and Practice of Midwifery, and the Diſeaſes of Women and Children. In addition to a conſtant ſupply of Labours, Gentlemen may have frequent opportunities of viſiting patients in diſorders during pregnancy, and after delivery.

Dr. BATTY will begin his Courſe of Lectures on the Theory and Practice of Midwifery, and on the Diſeaſes of Women and Children, on Monday, October 6, at his houſe, No. 6, in Great Marlborough-ſtreet, at eleven o'clock in the morning.

On the ninth day of the enſuing month, October, T. POLE, Man-Midwife to the Obſtetric Charity for the Delivery of poor Women at their own Habitations, will commence his Autumnal Courſe of Lectures on the Theory and Practice of Midwifery, including the Diſeaſes of Women and Children, at his houſe, No. 102, Leadenhall-ſtreet, near the Royal Exchange, London.

Mr. PEARSON will commence his Autumnal Courſe of Lectures on Surgery, at his houſe in Golden Square, on Monday, Oct. 6, at ſeven o'clock in the evening.

Mr. CHEVALIER's Autumnal Courſe of Lectures on the Principles and Operations of Surgery, will commence on Monday, October 6, at his houſe, No. 20, South Audley Street. The terms of attendance are Three Guineas.

Mr. CARPUE will continue his private Anatomical Lectures, at his houſe, No. 44, Leiceſter-ſquare. Particulars may be known by applying to Mr. C.

Meſſrs. A. and C. R. AIKIN will reſume their courſe of Lectures on Chemiſtry and the Chemical Arts, early in the winter, at the houſe of Mr. C. R. Aikin, Surgeon, Broad Street Buildings.

In the preſs, an Eſſay on Phlegmatia Dolens, or the painful Swelling of the lower Extremities incident to Lying-in Women. In which a literary hiſtory of this diſeaſe, comprehending a review of the different theories that have been formed concerning it, from the earlieſt records of medicine to the preſent time, will be given; and its analogy with peritonitis puerperalis, or child-bed fever, will be pointed out and elucidated by a compariſon of their ſymptoms, terminations, prediſpoſing, remote and proximate cauſes, and their cure. By JOHN HULL, M.D.

The

The ſame Author has prepared for the preſs, an Epitome of the Noſologia Methodica of Sauvages, which is intended to be publiſhed by ſubſcription. The propoſals and a proſpectus of the work will appear in a few weeks.

A ſecond edition is in the Preſs, and will be ſpeedily publiſhed, of Dr. CHISHOLM's Eſſay on the Malignant and Peſtilential Fever of Grenada, greatly enlarged; comprehending additional facts and illuſtrations in ſupport of its nature and treatment, as formerly deſcribed; with obſervations on contagion, the endemial fevers of the Weſt Indies, the effects of the nitrous acid and oxygenated muriate of pot-aſh in ſeveral diſeaſes, &c.

NEW MEDICAL PUBLICATIONS IN AUGUST.

New Inventions and new Directions to the Ruptured, by a private Gentleman. Low.

A Treatiſe on the Chemical Hiſtory and Medical Powers of ſome of the moſt celebrated Mineral Waters, with Practical Remarks on the Aqueous Regimen. To which are added, Obſervations on the Uſe of Cold and Warm Bathing, by William Saunders, M D. 8s. boards. Phillips, George Yard.

A Practical Treatiſe on the different Fevers of the Weſt Indies, and their diagnoſtic Symptoms, by William Fowle, M. D. 2s. 6d. H. D. Symonds.

NEW MEDICAL PUBLICATIONS IN GERMANY.

Ueber die Pulſader Jeſhvulſte, i. e. On Aneuriſms and their Surgical Treatment; by Dr. AYRER, with a plate, pp. 387, 8vo. Gottingen, 1800, Dieterich.

Beitrag zur Beurtheilung, i. e. Contribution to the Criticiſm of the Brunonian Syſtem of Medicine; by LEWIS CHRIST. WILLIAM CAPPEL, Doctor of Medicine at Gottingen, ſecond edition, much altered, pp. 448, 8vo. 1800. Gottingen, Dieterich.

Ritter's Darſtellung, i. e. RITTER'S Hiſtory of the lateſt Inquiries relating to the Illumination of Phoſphorus in Azote, and of the Reſults of it for Chemical Theory, 8vo. 1800. Jena, Fromman.

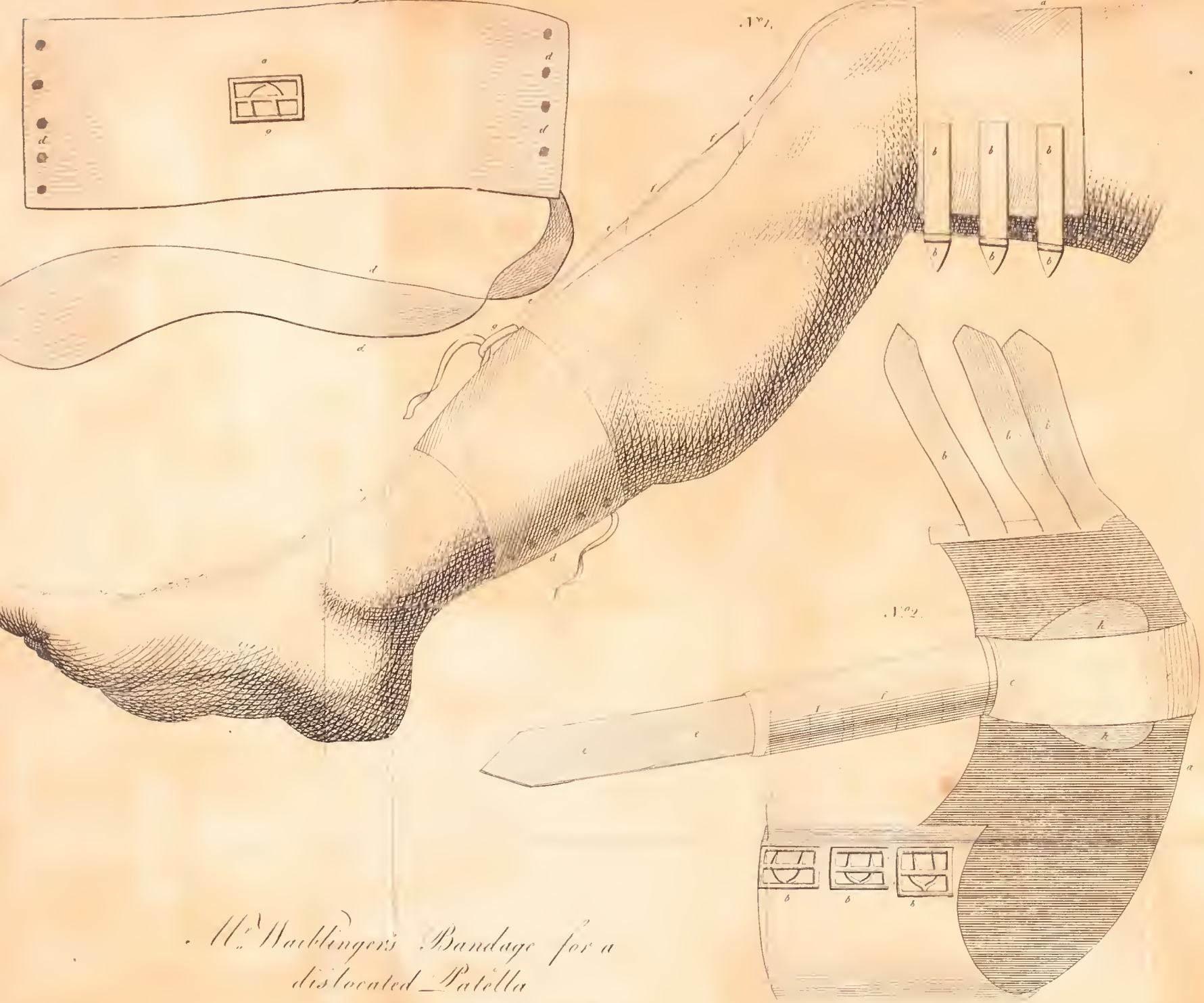
G. J. Beer's Methode, i. e. Method of extracting the Cataract along with the Capſula; with ſome other improvement of the operations of the Cataract in general. 1799, pp. 60, 8vo. with a plate. Vienna, Schaumburg.

To CORRESPONDENTS.

Our Correſpondents are particularly requeſted to give the TITLES *of their papers as well as the* Title of the general Subject.

We have received friendly and wholeſome advice, which we hope to profit by, from an anonymous Correſpondent reſpecting controverſial papers, and thoſe of young authors; but we ſhould have been more obliged to him if he had given us his address, as we might then have availed ourſelves of the advantage of his opinion on other occaſions.

Communications have been received from Meſſrs. Malin, Favell, Clutterbuck, Ballard, Thackeray, Croſe, Bellamy, and S. S. Doctors Carſon, Gillespe, and Simons.



Mr Warblingers Bandage for a dislocated Patella

Printed for R Phillips N°71 St Pauls Church Yard

THE

Medical and Phyſical Journal.

VOL. IV.] OCTOBER, 1800. [NO. XX.

Case of William Walton, of Pudſey, a young Man, 18 *Years of Age*; *by* I. WAIBLINGER, of Fulneck, near Leeds, Member of the Royal College of Surgeons in London.

[With an Engraving.]

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

ABOUT a year and a half ago, as the ſubject of the following caſe was diverting himſelf with ſome of his companions at the rural diverſion of hop, ſpring, and leap, he fell ſuddenly backwards; he felt no pain, but found himſelf unable to riſe; on being raiſed up by his companions, he found he could not uſe his right leg at all, though he made many efforts. From the circumſtance of his feeling no pain, he had no idea that he had received any ſerious injury. His companions, as ſoon as a horſe was procured, brought him to my houſe; on examining the knee, I found the *patella* was not in its place, but drawn up about three inches above the joint. The nature of the accident was now very obvious; the ſtrong ligament which confines the *patella* to the tuberoſity at the upper end of the *tibia*, was completely torn through, and the action of the ſtrong extenſor muſcles inſerted into the upper part of the *patella*, conſtantly drew it upwards. The indication then plainly pointed out, was to overcome the action of the muſcles inſerted into the *patella*. As I knew of no bandage adequate to this purpoſe, and as I expected ſome inflammation and tenſion would come on, which would for the preſent prevent any tight bandage being uſed, I applied a common roller round the thigh, rather as a placebo, than from any expectations I formed of its uſe; and a lotion of the *aqua lythargyr. acetat*, *&c.* to be frequently applied.

With the view of attaining the object of overcoming the action of the extenſor muſcles, and bringing the *patella* as near

as poſſible to its proper ſituation, I invented the bandage of which I herewith ſend a drawing and deſcription; it has this recommendation, that it is not a mere ſpeculative idea, but its utility is eſtabliſhed by the complete ſucceſs attending its uſe in the above caſe. The young man is now perfectly well; the *patella* is in its proper place, and he is able to uſe his limb as well as ever he did in his life. I believe accidents exactly ſimilar, are but rare; but I am perſuaded, that the bandage may be uſed with equal ſucceſs in fractures of the *patella*. Admitting the difficulty of bringing the fractured parts of the bone into ſuch cloſe contact, as to form an oſſeous union; yet, ſurely, the nearer they are brought into contact, the leſs time will be required to form a ligamentous union. There are ſome little improvements which may be added as circumſtances require; but as they will not alter the principle of the bandage, I ſhall not enter into them at preſent.—If the caſe related be found deſerving of a place in your Repoſitory, I ſhall continue to furniſh you occaſionally with ſome *practical obſervations*. I am,

Your's, &c.

I. W.

No. 1. The bandage as applied.—No. 2. The ſame in profile.

a, A leather ſtrap, three inches and a half in breadth, lined with ſoft waſh leather, and ſufficiently long to go round the limb above the knee, as is repreſented in No. 1; is faſtened with three ſmall buckles and correſponding ſtraps, as at *b*.

c, A ſtrap of the ſame kind, faſtened round the leg below the calf, the prominence of the gaſtrocnemic muſcles preventing its being drawn upwards, faſtened or laced tight with a leather thong on the underſide, as at *d*; and being ſo far from the ſtrap *a*, gives room for the elaſtic ſpiral ſpring to act, which is contained in the ſtrap *e*.

e, A ſtrap thirteen inches long, firmly faſtened to the broad ſtrap *a*, and contains an elaſtic wire ſpring in the middle part of it, as at *f*, which ſpring may be made to act at pleaſure, by tightening or ſlackening the ſtrap at the buckle *g*, which is inſerted into the upper part of the ſtrap *c*.

Under the edge of the ſtrap *a*, is a hard ſubſtance faſtened in, properly ſtuffed, reſembling in ſize the patella, is rather concave at the lower edge, that it may more eaſily hitch on to the convexity of the patella, as is ſhewn in the drawing at *h*.

N. B. A pad of wool or tow, was worn under the ſtrap *e*, where it croſſes the joint, to prevent excoriation.

To

To Dr. BRADLEY.

DEAR SIR,

THE following Caſe, which, during a conſiderable part of its progreſs paſſed under your notice at the Univerſal Diſpenſary, will not, I flatter myſelf, be deemed unworthy a place in the Medical and Phyſical Journal. It exemplifies, I think, the good effects of two powerful articles of the Materia Medica, *cold affuſion* and *lead*, in diſeaſes of the ſpaſmodic claſs.

I am, your's, with reſpect,

Walbrook, Aug. 15, 1800. H. CLUTTERBUCK.

Sarah Jones, aged ten years, reſiding in Ray-ſtreet, Cold-bath-fields, was attacked with ſymptoms of Cholera in July, 1794; on the following evening ſhe complained of univerſal pain of the limbs and trunk, and the next day began to be affected with ſpaſms in various parts, occurring at uncertain intervals: The ſymptoms of Cholera now diſappeared. Various antiſpaſmodic remedies were employed for the ſpace of a fortnight, but without any permanent advantage. She had taken opium in large and repeated doſes, both by the mouth and in clyſter; wine and other ſtimulants had been adminiſtered in conſiderable quantities; bliſters had been applied freely; and mercurial ointment had been rubbed into the back and neck in ſuch quantity, as to produce ſoreneſs of the mouth. On the 1ſt of Auguſt the ſymptoms were as follows.

I found her ſitting up in bed with her head ſtrongly bent back on her ſhoulders, in which ſtate it had continued without intermiſſion for the laſt two days; her countenance was expreſſive of great diſtreſs; every five or ſix minutes the ſpaſms increaſed in violence, occaſioning exceſſive pain, and forcing her to ſcream aloud; and once in four or five hours a general convulſion came on, in which her body was ſo forcibly incurvated backwards, as to cauſe it to reſt almoſt entirely on the head and heels (*opisthotonos*). This uſually laſted about half an hour, during which ſhe retained her ſenſes perfectly, crying out with the violence of the pain ſhe endured. She deſcribed the ſpaſms as beginning at the pit of the ſtomach, and ſpreading thence, around the ſides, to the muſcles of the back and neck. She complained of much head-ach, and had had little or no ſleep for ſeveral days. She had no appetite for food. The tongue was ſlightly foul, and there was not much thirſt; the pulſe at the wriſt was quick, and remarkably ſoft; the ſkin felt flaccid, and there was conſiderable tendency to ſweating, though with-

out much increaſe of heat. During the laſt twelve hours ſhe had taken a grain of ſolid opium every half hour, and her mouth was at this time under the influence of the mercury which had been rubbed in. The opium neither produced any remiſſion of the pain or ſpaſms, nor did it induce any tendency to ſleep.

It was now reſolved to try the effect of cold affuſion; and for this purpoſe ſhe was taken into the cellar naked, and ſeveral baſons of the coldeſt pump water we could procure were daſhed with force over the back and neck: the effect was ſurpriſing and inſtantaneous. From the firſt application, the ſpaſms almoſt entirely ceaſed. She ſmiling, ſaid, "I am quite eaſy now." After a few applications of the cold water, a ſhivering came on, and ſhe begged to be returned to bed, when a deſire for food was expreſſed, which ſhe took freely, and ſoon after fell into a ſound ſleep.

On the following morning we found her free from pain; ſhe had ſlept well, and eaten heartily. The muſcles of the neck continued ſomewhat rigid, but not ſo as to bend the head backwards. In the courſe of the day, there appeared a ſlight tendency to a return of the ſpaſms at times; and this was the caſe for ſeveral days after. The application of the cold water was, therefore, directed to be repeated three times a day; and as its effect was apparently diminiſhed by habit, it was rendered ſtill colder by the addition of ice, procured from a neighbouring confectioner.

Within the ſpace of a week, the muſcles of the back and neck ceaſed to be ſpaſmodically affected: The patient, however, ſtill complained of violent pain about the region of the ſtomach, ſpreading thence to the ſides, and recurring at uncertain intervals, generally twice or thrice daily; theſe pains were manifeſtly aggravated whenever the cold affuſion was repeated. In other reſpects, the patient was free from complaint, enjoying her appetite and natural reſt.

It was now attempted to relieve the ſpaſmodic pains at the ſtomach, by opium and ſimple ſtimulants; but theſe never produced the deſired effect, though exhibited in large doſes; and they manifeſtly increaſed the diſpoſition to ſpaſm. Camphor, given frequently in doſes of four grains, produced no effect on the pains, but was followed by a general efflorescence on the ſkin. The metallic ſalts were exhibited by turns with better effect, the ſpaſmodic pains wearing off gradually under their uſe: it was not, however, till the approach of winter, that they ceaſed to recur altogether. It is remarkable, that the patient bore large doſes of the vitriols of copper and of zinc, (as much as two grains of the former, and five of the

the latter) without having ſickneſs induced; yet, a ſingle grain of opium never failed to excite head-ach and nauſea. It was generally obſerved, that when the metallic ſalts induced ſickneſs, the pain at the ſtomach was the ſooner relieved.

After paſſing the winter without any of her former complaints, except occaſional pains at the ſtomach, but which did not materially affect her general health; this ſame patient, in July following, became again ſpaſmodically affected, but with ſymptoms varying ſomewhat from the preceding attack. The muſcles of the neck and back were at times affected, but in a much leſs degree than formerly. Some or other of the voluntary muſcles were generally in a rigid and contracted ſtate; ſometimes, however, they were all free from ſpaſm. The muſcles ſituated on the fore-arms were thoſe moſt commonly affected, the hands remaining cloſely ſhut, except the thumbs and fore-fingers, which ſhe had always the free uſe of. Sometimes ſhe had a perfect uſe of her hands for a ſhort time, then again they became ſuddenly contracted. When forcibly opened, which occaſioned conſiderable pain, they remained rigid, but cloſed again by ſlow degrees; marking the ſpaſmodic ſtate, as well of the *extenſor* as of the *flexor* muſcles. Different ſets of muſcles were affected at different times. Sometimes the head was drawn awry for an hour or two; or the mouth was violently diſtorted. At others, the eye-lids were forcibly ſhut. Two or three times in a day, or oftener, ſhe became generally convulſed, talking wildly and incoherently at the time. Theſe fits uſually laſted about half an hour.

Cold affuſion was again made trial of, but without its former good effect; and as it never failed to occaſion diſtreſſing pain at the pit of the ſtomach, its uſe was not perſiſted in. Opium always ſeemed to do harm, by increaſing the irritability, already in exceſs. Calomel was alſo employed, ſo far as to occaſion ſoreneſs of the mouth; but the ſymptoms were manifeſtly aggravated by it.

Conſidering that the diſeaſe viſibly conſiſted in a too great diſpoſition to contraction in the voluntary muſcles, and that *lead*, in its operation on the ſyſtem, produces ultimately a reverſe effect to this; finding, too, that the ſpaſms were aggravated by mercury, a ſubſtance which ſeems to be oppoſed, in its mode of action, to lead; and that little advantage was gained by the uſual tonic remedies, it was determined to try the effects of *lead*. A quarter of a grain of the acetite of lead (*ſaccharum ſaturni*) was therefore exhibited four times a day, and continued for the ſpace of three weeks, with little intermiſſion. After it had been uſed for the ſpace of four or five days, a conſiderable amendment was obſervable. The fit ceaſed to return,

and

and the partial ſpaſmodic contractions were much reduced in violence and frequency. At the end of the period above mentioned, the lead began to manifeſt its uſual deleterious effects on the ſyſtem; pains reſembling rheumatiſm were felt about the ſhoulders and fore-arms, and a weakneſs of the wriſt was apparent; coſtiveneſs, with pain in the bowels, likewiſe took place: On this account the lead was diſcontinued, eſpecially as the returns of the ſpaſms were now exceedingly ſlight and rare.

After a fortnight had elapſed, an increaſe of the ſpaſms took place, and the patient appeared relapſing faſt into her former ſtate. The lead was again therefore had recourſe to, and within a week was followed by the ſame good effects as at firſt, the diſorder being much mitigated in violence, but not leaving her entirely, nor did it do ſo till the return of winter, when the ſymptoms altogether, though gradually, diſappeared.

Although the uſe of the *saccharum saturni* was continued for upwards of two months, it did not now produce any ill effects on the ſyſtem. I had an opportunity of knowing, that the diſorder did not return the following ſummer; nor had any ill conſequence ſucceeded the employment of the lead, which was never given in greater quantity than above ſpecified. — I may add, that I have experienced the ſafety and advantage of this remedy in many other caſes of ſpaſmodic affection.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

THE ſucceſsful treatment of infectious Catarrhal Fever muſt be intereſting to ſociety at large; and more eſpecially perhaps in naval and military ſervice, wherein there are ſo many occaſional cauſes occuring to its production. I am,

GENTLEMEN,

Spencer, Portſmouth Harbour, July 20, 1800.

Your very humble ſervant,
G. BELLAMY, Surgeon.

An infectious Catarrhal Fever which exiſted with different degrees of violence on board His Majeſty's ſhip Bellerophon, from the beginning of March to the end of April, 1797, I believe to have ariſen from the following cauſes:

1ſt. The ſeaſon of the year, which was particularly moiſt with raw coldneſs, and a bleak eaſterly wind, while we were fitting

fitting at Spithead for foreign ſervice; ſhortly after which the diſeaſe took place.

2dly. The fatigue of the people in a haſty equipment, and the conſiderable addition of various ſtores, by which the ſhip was much crowded, preventing a free circulation of air, and aſſiſting the ill influence of that from the atmoſphere; which, whether it brought a diſeaſe *sui generis*, diſtinct in its form, and immediately acting on the body, prediſpoſed for its reception; at leaſt, acted as a debilitating cauſe, whereby the body became ſubject to fever, and marked by thoſe ſecondary ſymptoms, of affections of parts of the body moſt eaſily influenced by the occaſional cauſe, i. e. cold and moiſture. Indeed, I rather think that at all times, though the catarrh be the prominent feature, that it is not the eſſence of the diſeaſe; and that it ſhould rather be conſidered as fever with catarrh; that the former ſhould be the object of treatment, and that the pulmonic and other ſymptoms ſhould only be conſidered as of a ſecondary nature; that they ſhould not contradict the treatment of the fever, only when they become violent, and point out the neceſſity of ſome ſudden relief for the prevention of abſceſs of the lungs.

This was the almoſt uniform train of ſymptoms: The patients came in the morning, ſeveral together; complained of being taken ill in the night, ſome few of having gone to bed rather unwell; but always the alteration from health to ſickneſs was ſudden. Languor and deſpondency, nauſea, ſometimes vomiting; a ſenſe of cold and exhauſtion, (nothing like rigors ſucceeded by ſtrong febrile heat); great pain of the head and loins; giddineſs, almoſt drawing their limbs after them; obliged to be ſupported in the more ſevere caſes; hollowneſs of the eyes, with blackneſs of the eye-lids; fœtid breath, ſhort cough, and pain of the cheſt; pulſe quick and ſmall, tongue whitiſh and trembling. When the fever was abated, or gone off, there was a long continuance of cough and debility; and in a few, the induction of chronic diſtempers; one of dropſy; the diſpoſition to typhus was too plain. The indications of cure appeared to be:—Firſt, The removal, or correction of the oſtenſible cauſes; for which purpoſe the different parts of the ſhip, wherever bad air might be confined, or generated, were emptied, fumigated with the nitrous gas; waſhed, dried by fires, and then waſhed with lime and vinegar. The lower gun-deck was alſo fumigated, as directed, with the nitrous gas, whilſt the men were in their hammocks; and theſe meaſures were often repeated. The ſick birth, and bedding of the ſick, daily the ſame, unleſs when prevented by the violence of thoſe pulmonic ſymptoms which the gas always provoked. The ſick

were,

were, as much as poſſible, ſeparated from the ſhip's company, and every care uſed that none but the nurſes ſhould attend them. And here is the ſtrongeſt aſſurance of the infectious nature of the fever; for when all theſe occaſional cauſes had been removed, and when even we had changed our climate by going to Liſbon, the number of ſick did not leſſen, though the violence of the diſeaſe certainly abated; therefore, the permanence of the diſeaſe, and the number of men who ſucceſſively fell ill of it, muſt have been from contagion. The perſons of the ſick were alſo kept as clean as poſſible, and thoſe who were confined to bed were put apart.

Secondly, After having evacuated the primæ viæ by a gentle emetic, and procured a ſtool or two, which removed ſo much offending matter, I gave, every ſix hours, four ounces of wine and one of lemon juice, as a cordial antiputreſcent draught, and plenty of a pectoral decoction, which was alſo well acidulated. Where the oppreſſion of the cheſt was violent a pediluvium; and at night promoted gentle perſpiration by antimony and opium. In ſtill more urgent caſes, either of debility or pectoral affection, repeated bliſters between the ſhoulders, and on the breaſt, from which immediate relief was experienced. When the pectoral complaints were abated, and debility conſiderable, tonics ſeemed to be indicated, but did not anſwer, as they always brought on pain of the breaſt, &c. with increaſed violence; and as I found the above draught very efficacious, I forbore the bark, &c. till a ſtate of thorough convaleſcence, which was aſſiſted by an addition of wine, gentle exerciſe, and regulating the bowels.

With any other diſpoſition of fever venæſection would have been proper, where pulmonic inflammation was dreaded. In the caſe of thoſe who remained long affected with cough, &c. when the fever was entirely gone, bliſters and pectoral drinks were relied on, and proved equal to expectation, for I had the ſatisfaction not to loſe a man.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

I Do not remember in your valuable Journal, any diſcuſſion where death was occaſioned by poiſon; if you think the following will aſſiſt your uſeful intentions, its inſertion will much gratify your conſtant reader,

FREDERIC THACKERAY.

Emanuel College, Cambridge, July 18, 1800.

The subject was a child eighteen months old, in perfect health on the 15th, at eight in the evening: About half past eight was seized with vomiting and purging, succeeded by coma of some hours, and died violently convulsed at three in the following morning. As the cause was unknown, the child had only taken a little magnesia and rhubarb. I was desired to examine the body with Mr. R. Crispin, an able surgeon, at Royston, and opened it thirty hours after its death. The exterior of it exhibited nothing unusual; no swelling nor discolouration on any part of it. The vessels of the intestines in various parts, were very full, as if minutely injected. The stomach had its external vessels very much distended with blood, dark and very fluid, and a blush pervaded every part of its external coat. It was moderately distended with air, and about two ounces of a black viscid fluid, with several clusters of mucus or coagulable lymph in it. The inner surface of it was very red; and in some parts, particularly about the pylorus, it had a lividness approaching to mortification, and was studded throughout with a white powder, several grains of which were matted with some mucus, with which some experiments were made; and when exposed to the flame of a candle, fumes and a garlic odour were emitted, proving it was arsenic; of which there can be no doubt, as the girl afterwards confessed that she had given arsenic to the infant.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

FATAL accidents from the bites of venomous serpents are far from being uncommon in the island of Martinique; two instances of the sort have happened in the neighbourhood of this city within the last six months, terminating in death in twenty-four hours after the accident.

It would seem inexplicable, from natural causes, why Martinique, St. Lucia, and (according to some) the small island of Bequice should, of all the numerous islands composing this Archipelago, be infected with these venomous reptiles. Le Pere du Tertre, in his excellent History of the Antilles, Vol. ii. p. 319, relates a tradition of the native Caribbes, as to the origin of venomous serpents in Martinique and St. Lucia: They informed this Historian, that their forefathers waging a war of extermination with the Arrouagues, a nation of Terra Firma, the latter, unequal in war to their Caribb enemies, who made frequent incursions upon their coasts, bethought themselves of a singular expedient to be revenged on the islanders. They collected in baskets and earthen pots a number of venomous serpents, which, transporting to Martinique, there gave

them their liberty, in order that, without departing from their own coaſt in future, they, the Arrouagues, might make an eternal war againſt their Caribb enemies.

However this may be, Nature has not abandoned man without remedy againſt the deadly venom of this reptile, the fecundity of which is extraordinary, it not being uncommon to find ſixty or ſeventy young ones in the belly of a female, of which I have been an ocular witneſs in one caſe. The negroes long accuſtomed to the iſland, have not, in general, much apprehenſion from the bite of a ſerpent, (I have known ſeveral who have been bit repeatedly) whilſt thoſe who come here from the other iſlands, have as much dread of theſe reptiles as the Europeans. Two inſtances of perſons bit by venomous ſerpents have occurred here, both of whom recovered. The firſt was John Payne, a negro, reported to be in a dying ſtate about noon of Feb. 20, 1796. On viſiting him, he was found to be affected with the moſt dreadful convulſions, each acceſſion of which threatened to terminate his exiſtence. He had been bitten the night before, but being exceedingly intoxicated he had not paid any attention to it. When the effect of the ſpirits he had taken went off, he found his arm ſtiff, painful, and ſwelled up to the axilla; to theſe ſymptoms quickly ſucceeded nauſea, laborious reſpiration, and convulſions. The marks of the venomous fangs were obſervable over the abductor policis of the left hand, which, with the arm and breaſt, was conſiderably inflated. The patient was inſenſible for ſome time after every convulſion; and when ſenſible, he expreſſed the utmoſt dread of inſtant diſſolution. His anxiety was great, his pulſe was ſlow, ſmall, and irregular. Topical treatment of the envenomed points was judged uſeleſs after a lapſe of fourteen hours, the lymphatic glands and veſſels being evidently ſtrongly affected; the limb and breaſt were, however, bathed with hot lime juice and rubbed with camphorated Caſtor oil. A large doſe of Venice treacle with volatile aromatic ſpirit and vitriolic æther was adminiſtered to the patient, waſhed down with warm rum and water, which was repeatedly given him in ſmall quantities. After ſeveral frightful convulſion fits, his pulſe began to riſe, the reſpiration became more free, ſigns of a diaphoreſis appeared, and hope began to influence his mind. A ſecond doſe of the medicine was given him with the hot drink, and he was well covered with hot blankets; about two o'clock he turned himſelf on his ſide, fell into a warm ſweat, got ſome refreſhing ſleep, and was perfectly well next day.

The ſecond Caſe was that of Utill, a negro, who has often experienced the like accident. March 26th ult. he was bitten by a venomous ſerpent in the middle and external part of the left fore arm, whilſt cutting graſs near to the country-houſe of Admiral Lord Hugh Seymour, ſituated a mile from this town. His Lordſhip being near the ſpot, immediately made a ligature

on the limb, applied ſome ſpirit of hartſhorn to the wounds, gave the negro ſome of the ſame internally, mixed with rum and water, and ſent him off to this Hoſpital. The punctures made by the poiſonous fangs were evident; the arm was painful, and a little ſwelled up to the axilla; and the patient, tho' undiſmayed, (a matter of great conſequence in ſuch circumſtances) experienced ſome anxiety and pain of the left breaſt. Several ſcarifications were inſtantly made around the punctures, over which a cupping-glaſs was applied, and three or four ounces of blood extracted; the part was then ſponged with warm water, the limb and breaſt were bathed with Caſtor oil, and a ſmall poultice was applied to the part, compoſed of roaſted limes, a little ſalt and black pepper, and ſome of the powdered leaves of a ſpecies of Ariſtolochia *(Anguicida, Lin.)* the Lianne, a ſerpent of the French iſlands. Some rum with ſpirit of hartſhorn was given him internally, and he took ſome of the infuſion of the Ariſtolochia internally. He was prevented from going to ſleep, to which he ſeemed diſpoſed, and which is ſaid to be very dangerous in ſuch circumſtances, and remained exempt from any accident.

It is here proper to obſerve, that the Ariſtolochia was uſed externally and internally in this Caſe, on account of the ſtrong impreſſion on the mind of the negro, of the ſpecific power of that ſimple againſt the venom of the ſerpent, rather than from any rational dependance on it; as however effectual it may be when uſed freſh and ſucculent, that applied in this inſtance ſeemed nearly inſipid from having been long dried and carried in the pocket of the patient as an amulet, according to the ſuperſtition of the negroes. Beſides the ſnake-wood, or Ariſtolochia, in moſt general uſe by the negroes here againſt venomous bites, there is a ſpecies of graſs, called Pie de Poule, or chicken-foot, which grows very commonly here; this, beat up with a little ſalt and ſpirits, is applied as a remedy to venomous bites. Of this I have had no experience; but I have often uſed this ſimple with much benefit as a detergent and antiſeptic in foul ulcers. Arſenic and the volatile alkali are ſaid to be uſed by ſome with ſalutary effects againſt theſe accidents; wood aſhes and oil are alſo ſaid to be uſed in the ſame intention: This is recommended by the Pere du Tertre, as well as a poultice of quick-lime with oil and honey; garlic externally applied, and given internally; the green leaves of tobacco, bruiſed, and applied to the part; whilſt theriaca and cordials are to be adminiſtered; and the patient is to be reſtrained from taking large draughts of any liquid, or from the dangerous indulgence of ſleeping, to which there is generally much propenſity. I am, GENTLEMEN,

Your moſt obedient ſervant,

LEONARD GILLESPIE, M.D.

Naval Hospital, Fort Royal, Martinique,
May 7, 1800.

A Case of the Cure of Cancer of both Breasts, the one ulcerated, the other schirrous.

By WILLIAM NISBET, M.D. Fellow of the Royal College of Surgeons, Edinburgh; now of London: and Mr. ISAAC OLIPHANT, Member of the Royal College of Surgeons, London.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING devoted my attention of late years to a particular line of medical practice, the subject of which has been deemed one of the chief opprobria of the profession; and from a conviction that this general opinion is by no means well founded, and that Cancer is equally curable as any other species of swelling or ulcer, it is incumbent on me, in entertaining such new sentiments, to support them by the evidence of incontrovertible facts.—I shall therefore state the following case, one of the most melancholy that can occur, as an introduction to a number of others which shall be occasionally given to the public, through the medium of your useful Miscellany.

Mrs. G. the wife of Mr. G. a coal merchant in Tottenham Court Road, aged upwards of 40, about two years ago, felt a hardness and swelling of her left breast, with all the usual symptoms of schirrous or incipient cancer. For this complaint she first consulted Mr. Ford, who advised, in that stage of the disease, the application of leeches, which was done without effect. She then put herself under the care of Mr. Cline, and continued to follow his prescriptions for the space of two months, not only with equal inefficacy, but with a gradual aggravation and increase of the disease, which was attended with the most severe darting pains and burning heat. In this unhappy state, anxious to obtain relief, her next resort was to the advice of Sir James Earle, who told her that it was a stony cancer, and incurable, declining at the same time to prescribe any thing, but humanely offering (being ignorant of her real circumstances in life) to give her a letter of admission to the Middlesex Hospital. At the request of Dr. Budd, to whom her husband had been recommended, she was next seen by Mr. Cooper, who concurred in opinion with Sir J. Earle, that it was incurable, and declined any connexion with the case. Thus deserted by the Faculty, the patient was induced, by the over-persuasion of friends, to put herself into the hands of an ignorant empyric, under whose applications the disease passed rapidly into the stage of ulceration, and made horrid progress. In consequence of the severity of her sufferings, she was soon again obliged to solicit the assistance of a regular practitioner, and she was accordingly

visited by Mr. Andrews, surgeon, of Greek-street, along with another gentleman, whose name the patient does not know. On their concurring opinion that her case was incurable, and that nothing could be done for her relief, she at last had recourse to the advice of Mr. Oliphant, of Percy-street; who, with a proper anxiety for his patient, and a zeal at the same time directed by humanity, which every practitioner of medicine should possess, soon after visiting her, and finding that tho' her complaints were palliated, no progress was made towards a cure, advised to call in Dr. Nisbet, whose attention, he understood, had been particularly devoted to this malady.

On my first visit, I found the disease far advanced in its ultimate stage, a short description of which will be sufficient to convince every practitioner of its fatal and apparently speedy termination. An extensive foul spreading ulcer occupied the whole surface of the left breast with thick reverted edges covered with the particular sordes characterizing such sores, and occasionally pouring out quantities of blood from the eroded vessels. Besides the substance of the breast, itself totally diseased, the cuticular glands all round were hard and schirrous to a considerable extent. In the axilla, the glands were swelled to the size of a pigeon's egg, and the whole of that side was tight, contracted, and knotty, with clusters of swelled lymphatics in different parts of it. The patient could hardly use the left arm, and was totally unable to lie on that side. An erysipelatous inflammation diffused itself for a considerable way beyond the actual limits of the disease. On examining the right breast, I found a large schirrous formed in it, which had not yet arrived at an active state. The hectic fever was strongly formed, and the patient's health rapidly declining.

Mr. Oliphant was of opinion the disease was incurable, unless a complete sloughing of the whole breast took place; and I could not, in such a situation, flatter with strong hopes; determined, however, to follow the plan which I have generally found successful, I communicated my sentiments to him, who, with that liberality which every man of real science possesses, acquiesced, and gave every freedom in pursuing it.

The treatment was accordingly begun about the beginning of July, and continued for upwards of six weeks. During its progress, the curative fever was raised to a height sufficient to subdue the morbid action in the diseased parts, and was even attended with some symptoms that required mitigation. Several of the swellings disappeared during the height of the fever; in its progress, the discharge became daily more bland, whitish, and purulent; and immediately on its decline, the sore assumed marks of healing, which have proceeded so rapidly, that it is now within the size of a shilling of being completed. The structure of the breast, (at least what remains of it) is reduced

to its natural ſtate; the ſwellings of the arm-pit and ſide are totally removed, and a complete cure in every part ſeems effected.

From the firſt applications that were made, the pain and burning heat from the diſeaſe gradually departed; no ſloughing of any portion took place; but a gradual increaſed abſorption removed the altered organization, and reduced the breaſt to its proper form. This ſhrinking and abſorption were very remarkable long before any marks of healing appeared, and this proceſs ſeemed to be the laſt induced by the action of the remedy.

The above facts will be ſufficient to ſhow, that the principle of cure is different from any that has yet been attempted; but at preſent I ſhall enter into no further detail of it than ſay, that it conſiſts in no ſecret remedy or ſpecific, but proceeds on thoſe general principles which apply to every form and ſtage of the malady.

I have been particular in ſtating the medical advice this patient received, that the Gentlemen mentioned may themſelves make the neceſſary enquiries concerning the iſſue of it.

I am, GENTLEMEN,
Your's, &c.
W. NISBET.

St. James's Street,
Sept. 22, 1800.

MONTHLY REPORT of DISEASES,

Admitted under the Care of the PHYSICIANS of the FINSBURY DISPENSARY, St. John's Square, Clerkenwell.
From Auguſt 20 to September 20, 1800.

Continued Fever	54	Chloroſis and Amenorrhœa	10
Small-Pox	8	Menorrhagia	3
Cholera	20	Cephalæa and Hemicrania	11
Diarrhœa and Dyſentery	62	Dropſy	5
Sore Throat	3	Vertigo	2
Rheumatiſm	12	Pleurodyne	3
Pleuriſy	1	Nephralgia	2
Pulmonary Conſumption	5	Colica Pictonum	2
Catarrh	1	Hemiplegia	1
Cough and Dyſpnœa	8	Eryſipelas	1
Aſthenia	21	Ptyaliſm	1
Dyſpepſia	6	Urinæ Incontinentia	1
Gaſtrodynia and Enterodynia	9	Prurigo and Chronic Eruptions	15
Hypochondriaſis	3		
Hyſteria	3	Acute diſeaſes of Infants	18

Diſeaſes of the alimentary canal continue to be the reigning epidemics. The cholera, which was unuſually prevalent during the latter end of July, and the greater part of Auguſt, is now on the decline, and the diarrhœa and dyſentery have ſpread themſelves in an equal proportion; each diſorder thus obſerv-

ing, in the moſt exact manner, its natural progreſs and ſeaſon. The cholera rarely occurs in this country, except during the warmeſt period of the ſummer; and its frequency and violence correſpond, for the moſt part, with the intenſity and duration of the atmoſpherical heat. As a hot ſummer immediately *excites* the cholera, ſo it *predisposes* to diarrhœa and dyſentery, which uſually make their appearance on the acceſſion of the chilling damps of autumn. The immoderate uſe of fruit, to which theſe maladies are commonly attributed, may, in a few inſtances, contribute to produce them; but in by far the greater number of caſes, there has been no reaſon whatever, on minute enquiry, to aſcribe their origin to matters taken into the ſtomach. In conformity with the ſame vulgar notion, it has been reported, that a quantity of damaged foreign wheat, ſaid to be mixed with the bread now made uſe of in London, has alſo had its ſhare in promoting theſe diſorders. The cholera of the preſent ſeaſon, in ſeveral inſtances, proved equally violent with that which is deſcribed by Sydenham, as prevailing in the Summer of 1669; and it afforded ſome idea of the ſeverity of this diſeaſe in the tropical regions. It often commenced with a very acute pain at the pit of the ſtomach, or in ſome part of the abdomen, which generally continued till the bilious vomiting and purging began to abate. Theſe evacuations, or ineffectual convulſive efforts to produce them, were almoſt inceſſant; and in the ſhort intervals between them, the patients laid in the moſt diſtreſſing ſtate of naufea, pain, and anxiety, with an almoſt total deprivation of muſcular power. The pulſe was much hurried, weak, and often irregular. The ſkin was ſcarcely hotter than natural, but frequently bedewed with a clammy moiſture. The tongue was parched and foul, and there was a great complaint of thirſt. In the majority of perſons, however, who were affected with this diſeaſe, it proved of a more mild nature; and in one only did it terminate fatally. The patient was a young woman, about 18 years of age, who for ſome time before had been affected with a ſlight degree of leucophlegmatia, the conſequence of amenorrhœa; after ſeveral hours of ſevere vomiting and diarrhœa, ſhe ſuddenly became comatoſe, and died in leſs than twenty-four hours afterwards. The violent ſtraining in the act of vomiting had, probably, produced an effuſion within the head, an accident rendered the more likely by the particular ſtate of her habit.—The ſymptoms of cholera afford a very good example of what phyſicians call the vis medicatrix naturæ; and its medical treatment is founded on this principle: In general, it is only neceſſary to give large quantities of mild liquids, in order to dilute the acrid bile, and to render its diſcharge the more eaſy. When the evacuations have ceaſed, an opiate affords great comfort to the patient, by removing the naufea, pain, and uneaſy feeling which remain, and by indu-

cing a refreshing sleep. When the disease, however, is extremely violent, or long continued, and is attended with great debility, it becomes expedient to add some slight cordial to the liquid, which is drank, and to check the evacuations by means of opiates; fomentations to the stomach and abdomen, may also be employed with advantage. A great irritability of the alimentary canal often remained for a considerable time, the patient rejecting all kinds of aliment, having a foul tongue, and complaining of continual nausea. To remove these unpleasant consequences, an emetic was prescribed, and for some days afterwards aromatics, with small quantities of opium; and then the use of any light bitter soon restored the stomach to its usual functions.—In others, a diarrhœa continued, and sometimes degenerated into a dysentery. Indeed, the cholera, diarrhœa, and dysentery, are very nearly allied, and pass into each other by insensible gradations; the two latter especially, are often so much alike, that, except in a certain number of marked cases, which point out the peculiar circumstances of their distinction, it is doubtful whether we ought to affix to the disease the one name or the other. This, however, is of little importance in their treatment: In general, twelve or fifteen grains of rhubarb taken every morning for a few days, removes the complaint both safely and effectually. A pill containing one grain of opium and one of ipecacuanha, may at the same time be taken each evening on going to bed. The diet should consist of nourishing emollient liquids, as weak broths, rice gruel, &c. In the cases more purely dysenteric, and attended with much pain and tension of the abdomen, a solution of neutral salts every morning has a more powerful effect than the rhubarb, in removing the scybala retained in the intestines. There were some instances of very severe head-ach, and much general disorder occasioned by the diarrhœa having been prematurely checked by opiates and astringents. In all cases indeed of this complaint, but especially when it prevails epidemically, the means of stopping it should be used with great caution.

The continued fever, or typhus, although considerably increased in frequency during the present month, has become more mild in its symptoms; the furious delirium in particular, with which it was attended during the heat of the summer, and which gave it at that time the name of the *brain fever*, having now, in good measure, subsided. A relaxed state of the bowels, at present, most generally attends it; and, within due bounds, appears to be salutary. Thus, the observations of the immortal Sydenham, in regard to the influence of the reigning epidemic on the other contemporary diseases, and the importance of keeping in view this fact in their medical treatment, receive, in every succeeding season, additional confirmation.

W. W.
J. R.

To Dr. BRADLEY.

DEAR SIR,

WE are obliged to Dr. Wells * for communicating to the public, the obſervations which have induced him to adopt the opinion of thoſe, who hold that Eryſipelas of the Face is a contagious diſeaſe. This opinion was never advanced by the late Dr. Cullen,† though noticed by him. "This diſeaſe," ſays the Profeſſor, "is not commonly contagious; but as the diſeaſe may ariſe from an acrid matter externally applied,(1) ſo it is poſſible that the diſeaſe may ſometimes be communicated from one perſon to another".(2)‡ I will now give you his commentary on this text, as I wrote it down, I believe, at the ſame time that Dr. W. took his notes.

(1) "The ſting of a bee or waſp, I have ſeen produce all the effects of eryſipelas of the face; and it is probable, that acrimony may be communicated from one perſon to another."

(2) "An hoſpital phyſician, of ſufficiently juſt information, ſays, that they have had inſtances of the contagious nature of the diſeaſe, ſeveral perſons being affected in the ſame room or ward. That it has been ſo communicated is a fact; but I have a hundred negative inſtances, in which only one in a family has been affected, though there was a free communication between the patient and the other branches of the family."

I obſerve, that in my copy of the Profeſſor's text book, I have drawn a line through the above paragraph; but whether by the Profeſſor's direction or not, I cannot call to mind.

Now, what are we to think of Cullen from the text and the commentary? He admits the fact communicated by the hoſpital phyſician, but alleges, that he has a hundred negative inſtances to prove the contrary. Has not every one ſeen a hundred inſtances of typhus, in which only one in a family has had the diſeaſe? But ſhould we be juſtified in aſſerting, that ſuch a diſeaſe was not contagious? Dr. Wells's concluſion is, that the Profeſſor was "either unconvinced of its truth, or was unwilling to acknowledge it;" but, if the Doctor had continued to peruſe the whole of the chapter, he would have found the following paſſage: "We have hitherto conſidered eryſipelas as, in a great meaſure, of a phlegmonic nature; and

* Med. and Chirurg. Trans. V. ii. p. 213.

† Ib. p. 214.

‡ Firſt Lines, 1779, V. ii. p. 8. (not 228, as in Med. and Chirurg. Tranſ. V. ii. p. 222.)

agreeably to that opinion, we have propoſed our method of cure. But it is probable, *that an eryſipelas is ſometimes attended with, or is a ſymptom of, a putrid fever*;(3) and in ſuch caſes, the evacuations propoſed above may be improper, and the uſe of the Peruvian bark may be neceſſary;(4) but I cannot be explicit on this ſubject, as ſuch putrid caſes have *not* (5) come under my obſervation."(6) p. 14.

My commentary on the above paragraph is as follows:—

(3) "The carbuncles in the plague are a kind of eryſipelas: If a ſymptom of putridity, it is probable that there is always a mixture of putreſcency in eryſipelas."

(4) "Or indeed our principal remedy; though, in true inflammation, highly improper."

(5) "Hardly."

(6) "In ſome caſes the bark has been employed, not only with ſafety, but with apparent advantage; but ſuch caſes are of rare occurrence: It has been found neceſſary in the London hoſpitals. In great cities there are more ſources of putrefaction; and in ſuch cities, hoſpitals are chiefly found; whence the greater frequency of ſuch caſes in ſuch ſituations."

Dr. Wells's caſes, therefore, confirm the opinion of that excellent teacher, whom, however I may differ from him on the theory of fever, I ſhall venture to call the beſt writer on medicine of the eighteenth century, that "it is probable that eryſipelas is ſometimes attended with, or is a ſymptom of, putrid fever." Dr. W's two firſt caſes, which occurred in May 1796, appear to me to have been inſtances of typhus eryſipelatoſa, the eryſipelas typhoides of Sauvages.* Of the nature of thoſe caſes of eryſipelas of the face, which occurred in Auguſt and December, I do not preſume to judge, my experience, like that of Cullen's, having been hitherto of the negative kind. Such of your Correſpondents as keep notes of their caſes, may, perhaps, aſſiſt us in determining their nature. On the 7th of October, I had a caſe of eryſipelas of the face, and another on the 9th of January, 1797. Typhus was the prevailing diſeaſe of September. I do not remember ever to have loſt a patient in eryſipelas of the face. Whether this has been the reſult of accident, or to my having ſeldom, if ever, employed venæſection, confining myſelf to natron vitriolatum, hydrargyrum, and antimonium tartariſatum, with the occaſional uſe of cinchonæ, is uncertain. What is the nature of eryſipelas of the face in the fen countries? Are not the diſeaſes of London, in ſome meaſure, ſtill affected by the low grounds of Eſſex?

I take

* Noſol. i. 450.

I take the liberty of submitting to the consideration of Dr. Wells, whether, if the Erysipelas of the Face be at any time a really contagious disease, we may not expect to find, as in most contagious maladies, persons of all ages in the same family affected with it. I may add too, that "persons who have once laboured under this disease," as Cullen observes, "are liable to returns of it." Now, in contagious diseases, the reverse has been observed. Those who have had the small-pox are so seldom liable to be affected a second time, that every one considers himself as secure from the disease. The same person very rarely has the chin-cough; and those who have gone through typhus, are certainly less liable to receive the infection.

In the volume which contains Dr. Wells's Observations, is a reflection which, as a botanist, I cannot allow to pass without animadversion:* "Bitter medicines," says Dr. Fordyce, whose ingenious observations on our art merit the thanks of all his brethren, "such as the bark of the cinchonæ, several species of the artemisia of Linnæus, who, it may be observed, *has constantly endeavoured to mislead students in medicine*, by taking the name of the genus from the species which has the least effect, or a dissimilar effect from the greatest number of the species in it, &c.†" Linnæus was not without his weaknesses; but nothing could be farther from his intention than to mislead the medical student, as is evident from his Materia Medica, Amoenitates Academicae, Flora Lapponica, Flora Suecica, &c. &c. Artemisia, Absinthium, and Abrotanum, all Greek names, distinguished as many genera in the system of Tournefort; Linnæus very properly reduced them to one. "Nomina generica poetica, deorum ficta, regum consecrata, et promotorum botanices promerita retineo," is one of his canons in his *Philosophia Botanica*.‡

To Artemisia he gave the preference, in honour, as he supposed, of the Queen of Casia,§ though it more probably received its appellation from the same origin as Artemis, the Greek name of Diana, that is, from *Artemees*, safe; both the herb and the goddess being believed to preserve the mother in child-birth. Pliny says, "Ab Artemide Ilithyia, quoniam privatim medeatur foeminarum malis."‖

Chesterfield, Aug. 21. JONATHAN STOKES.

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* Dalech, 1599.
† Med. and Chir. Transf. V. ii. p. 325.
‡ Ib. p. 170, n. 237.
§ Ib. p. 171.
‖ Hist. Nat. xxv. c. 7, p. 636.

Dr. Domeier, *in Answer to Dr.* Dyce's *Letter.**

Sir,

I Assure you, that it is not without unpleasant feelings that I undertake to communicate to you publicly, in a language which I am not accustomed to write, a case like your's, which I treated successfully: And I certainly should not expose in an unpolished, and even perhaps not faultless style, what were my thoughts on the indisposition in question, if it was not for the success I met with during my treatment of it.

It would be a particular satisfaction to me, to hear that the proposed plan was likewise to answer your wishes; I then should be the surer of being pardoned for the unphilological way in which I exhibit the story of my patient.

It was at Berlin, in the beginning of May, 1799, when a French clergyman, forty years of age, of a melancholy disposition, and constant sedentary life, came to me for my advice. His complaint was an uncommon thirst of eighteen months standing; since the beginning of which, till then, he had remarked nothing else wrong in his constitution, but his growing thinner, and in consequence of it, weaker in bearing bodily fatigue. To his best remembrance, he had never had any illness in his life; and after a minute examination, I concluded that all his animal functions were in perfect order. His appetite was strong, his tongue clean, and his sleep good, when not interrupted by the violent thirst. His melancholy turn of mind he attributed to his present situation, living but poorly, and far from his own home; but his friends told me that he was, when in France, of the same disposition.

When he applied to me, he said he had already been to several physicians, who gave him no medicine, answering, that there was no remedy for him; he therefore employed whatever remedies his friends recommended to him, but all proved useless. The quantity of liquids he swallowed was enormous. He could hardly put the glass out of his hand, before he vehemently desired to drink again. He mostly drank water, for he could afford nothing else; but whatever liquid he could get was desirable, viz. tea, coffee, beer, wine, milk, &c.

The quantity of urine he made, did not, even to the fourth part, correspond with the quantity he drank; besides, he eat a great deal of watery nourishment, as soups, fruits, vegetables, &c.

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* See Medical and Physical Journal, No. xvi. p. 526.

&c. a circumſtance which firſt of all attracted my attention, for this uncommon quantity of fluids ought to remain ſomewhere, as his ſtools were perfectly regular; for great thirſt is a common ſymptom in profuſe evacuations, as in copious diarrhœas, diabetes, and even hæmorrhagies.

Having, therefore, no other probable indication to found the cure upon, I thought that the inſenſible perſpiration was too much increaſed, and that the only plan for a cure would be to check this, if I poſſibly could, and to order the patient a beverage which has the virtue of quenching thirſt in the ſmalleſt quantity.

To anſwer the firſt purpoſe, I deſired the patient to dreſs much cooler than he was accuſtomed to do; to uſe the cold bath, and to dry himſelf very negligently afterwards; to put his feet from time to time into cold water, and keep on his ſtockings for a conſiderable time afterwards; to expoſe himſelf to the cool evening and morning air, often even to a thorough air, and to be very thinly covered in bed. His dinner was to be quite cold; nothing warm was allowed him to drink.

To anſwer the ſecond purpoſe, (it being known that acidulous beverages extinguiſh thirſt much better than any other kind) I thought that a mineral acid would anſwer ſtill better, and in conſequence preſcribed him ſulphuric acid, to be mixed with water to a pleaſant degree of acidity, and to drink of it as much as he pleaſed.

After he had followed this advice with exactneſs about a fortnight, he found himſelf a great deal better; he then had intervals of about an hour, in which he did not deſire to drink at all.

I altered nothing, and he was very willing to continue the ſame plan. After full three weeks, his complaint was entirely gone. However, I thought it prudent to make him continue the ſame regimen for a longer time, and leave it off by degrees; but when he had continued it for a very ſhort time, after his recovery, he thought himſelf in perfect ſecurity, got tired of it, and left off all the preſcriptions at once.

He remained well for a few weeks, when the unnatural thirſt began again; and thinking that this proceeded only from the weather, which had become warmer, he did not immediately apply to me. But the thirſt increaſed, and came to the ſame unpleaſant degree it had done before. He then applied to me again; upon which I ordered him to do juſt the ſame as at firſt. He did, and got well again, and even in a ſhorter time. He continued now for a long while to apply one or the other of the preſcribed remedies, eſpecially the cold bath

bath, and remained perfectly well till April, 1800, when I saw him last.

Now I am perfectly aware that this is only one observation, and therefore not to be termed an experience, and that it would be wrong to pretend with certainty that my conclusion was sure, and that my remedies, in consequence, removed the disease; however, there is a great probability in their favour, as both times the indisposition was done away exactly in the same manner, and in a short time after the remedies were applied; and besides, the patient had altered nothing in his manner of living to which the cure could be ascribed.

It would be a particular satisfaction to me if the treatment which succeeded with my patient should likewise answer your wishes; and, I dare say, it will not be uninteresting to the readers of the Medical Journal, to make it known in this way.

I have the honour to be, SIR,

Your most obedient servant,

London, Aug. 27, 1800. W. DOMEIER.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IT will give me great pleasure if the enclosed letter, originally transmitted to the Board for Sick and Wounded Seamen is inserted in your valuable Journal. I am fully aware that it contains little that can be considered in any degree new; but it may answer the purpose of exciting a more extended attention to Vaccine Inoculation amongst that part of my profession attached to the Navy, as I am myself, from indisposition, at present personally incapable of prosecuting the object my letter holds up to view. A copy of it was sent to Lord St. Vincent, in consequence of the Magnificent having some communication with the Cumberland, on board of which ship the Smallpox existed; and the reception it met with from his Lordship, proves him to be fully as capable of promoting those branches of science which have a tendency to meliorate the condition of man, in honouring with his attention useful suggestion, as of repressing the power of his enemy. But notwithstanding his Lordship's decided approbation, local circumstances, connected with the Magnificent, wrested from my hands the pleasure of actually introducing Vaccine Inoculation into the Navy.

I am, GENTLEMEN,

Edgecombe-street Stonehouse, Your obedient humble servant,

22 August, 1800. JAMES VEITEN.

To the COMMISSIONERS for SICK and WOUNDED SEAMEN.

GENTLEMEN,

THE Vaccine Inoculation has, ſince my return from the Weſt Indies, attracted very general notice, and ſeemingly, very deſervedly, as it apparently offers the moſt eminent and permanent advantages to ſociety. Inquiry at the Small-Pox Hoſpital, which I viſited early after my arrival in England, and reading, have convinced me of its utility; and I feel animated by a deſire, provided the Board approve it, of extending its advantages to the Magnificent, by inoculating, in a gradual and limited way, all thoſe men who have not ſuffered from Small-pox, as a ſecurity againſt its irruption at any future period. The Cow-pox, from every idea I have been able to collect relative to its nature, appears not to be communicable from the perſon inoculated to another, unleſs through the medium of inoculation; it likewiſe ſeems not to be ſtrictly a puſtular diſeaſe, of courſe not loathſome either in point of ſmell or otherwiſe; and the perſon who has been ſubjected to its action, is not only ſecured againſt its influence, but is alſo inſulated as to the power of the variolous contagion; and, to crown all theſe advantages, the fever and exceſſive excitement conſequent to its abſorption, ſcarcely merit the appellation of diſeaſe — Circumſtances recommending it in the fulleſt degree for naval practice, as the neceſſarily crouded ſituation of men on board of ſhip would render the introduction of a contagious diſeaſe, however mild, into a healthy man of war, with the view of ſuperceding the attack of one more virulent, active, and deadly, ſubject to be conſidered an unpleaſing and dangerous clue for the medical man to wind from; but the diſeaſe in queſtion is not liable to ſuch an objection. Independent of ſecuring our naval exertion from any depreſſion from Small-pox, during the time of war, there is a period approaching when ambition will be taught its limits, and we may ceaſe contending for our ſecurity and independence; it is then that this practice will ſhine forth with peculiar luſtre and advantage, and prove one great means of reſtoring rapidly the depopulation neceſſarily flowing from war. Men who have fought the battles of their country are drawn from all, and a great many from the remoteſt, parts of the three kingdoms, where the prejudices of education, religion, and ignorance, operate as injuries to ſociety, from the bulk being in ſome degree guided by ſuch principles; it therefore becomes a national and material point to gain an acceſſion of opinion in favour of this mild mode of inoculating, which ought not to be allowed to paſs unobſerved by thoſe men, provided

vided it were introduced into the navy, and the reduction of prejudice, eventually arising from examples of its utility, would adhere to the mind, and, at the conclusion of the war, would prove the means of disseminating its advantages widely amongst the descendants of those who have served, and are likely to become themselves in their turn the bulwark of our country. Our commercial interests, as well as gratitude arising from the brilliancy of our naval victories, and a knowledge of the number who have fallen during the pending contest, demand the extension of a fostering hand to this order of men.

The discovery of the circulation of the blood, which for a time injured the fame and reputation of the immortal Harvey, is a wonderful example of the narrowness and perversion of ignorance; and the opposition which the introduction of the inoculation for the Small-pox met in London and throughout England, is fresh in the memory of thousands. Hence the necessity for annihilating prejudice in bringing about a revolution of so much importance, and pointing out, by every possible means, the track proper to be followed; for what gutta serena is to the eye, prejudice is to the mind.

I am in possession of the vaccine virus; but I conceive it my duty to avoid any application for its being carried into effect, until I receive the opinion of the Board, who may perceive dangers I am not aware of. I am,

GENTLEMEN,

Your very humble servant,

JAMES VEITEN.

Magnificent, off Brest.
July 26, 1800.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

MY prediction, respecting the future reputation of the *Foxglove*, will, I have no doubt, be eventually accomplished. In this town and neighbourhood the plant is now in more general use than any other healing agent; and either in a solitary or in a combined form, it is employed in almost every case of *increased vascular action.*

In *pneumonic inflammation*, and in *active hæmorrhagies*, it certainly possesses powers approximating to specific; and even in cases of *continued fever*, of various types, I have repeatedly witnessed the most beneficial effects from its administration.

This

This high character of the plant has not been acquired by the exertion of any authority in its favour, but by the ſtriking proofs which it continues to diſplay of its curative powers. In oppoſition to much preconceived opinion, and much ſtrong prejudice, I know that it has forced itſelf upon the notice of many of my friends, and now forms a very principal inſtrument of their practice. This general employment of the *Digitalis* has excited much attention to the collecting of the leaves, and to the mode of preparing them for uſe; and I imagine that the Medical Gentlemen of this place, keep the plant in as high a ſtate of perfection as it can be met with in any part of the kingdom.

I have obſerved, in another place, that the proper doſe of a medicine is juſt that quantity which will produce the deſired effect; and that the proper doſe of the *Digitalis* is that which, by gradually bringing the ſyſtem under its influence, will ſo regulate the motion of the heart, as to reduce the pulſations of the artery to a given number.

I think that the choice of the preparation to be employed may be left to the diſcretion of the preſcriber; for if his principal object be the diminution of vaſcular action, I know that he can very certainly accompliſh this end, either by means of the *powder* or the *tincture* of the plant; any diſputation, therefore, about which of thoſe two we ought to employ, has always appeared to me unneceſſary.

For upwards of twelve months I have preſcribed the *Digitalis* very extenſively; and during the laſt ſix of that period I have had very ample experience of its powers. I am now fully perſuaded, that, by a judicious management of the plant variouſly combined, I can obviate *pneumonic inflammation with as much certainty as I can arrest the progress of an intermittent fever by means of the bark of the cinchona.* Again, I am perſuaded that, if *pulmonary consumption be divided into four stages, the Digitalis will very certainly cure the three first, and as certainly alleviate the distressing symptoms of the last.*

I am aware that the introduction of a new remedy is a taſk difficult and dangerous; for I am aware that there are men, who will not only oppoſe, but cenſure with much aſperity, the application of any healing power which has originated with, or been patronized by, a rival practitioner. This narrow principle is the reproach of individuals; and the diſgrace of ſcience. Some time ago, in conſultation, I recommended a trial of the *Digitalis* in a caſe of *phthisis.* It was contended that the plan would avail nothing; nay, that its effects would be highly injurious. I aſked my medical friend, if he had ever employed the *Fox-glove* in caſes of *pulmonary consumption?* "I have

not" was his reply. "Which of us, then," I rejoined, "is beſt entitled to decide on its effects: you, who have never exhibited it at all; or I, who have adminiſtered it a hundred times?

In my eſtimation, a man becomes truly contemptible when he either betrays a haughty impatience of every improvement upon ſubjects of ſpeculation, or when, by an ungenerous exertion of overgrown authority, he is captiouſly ſolicitous to doom to diſregard every opinion which is not his own. It is certainly not unreaſonable to demand that the *Digitalis* ſhould have the ſame fair trial which other remedies have had; and that it ſhould *be exhibited in a genuine form, in the doses, and in those diseases, for which it has been recommended by its advocates.*— The ſubſtantial qualities of the plant will thus be very certainly aſcertained. It is admitted on all hands, that the *Digitalis* is a plant of much activity; it ſurely, then, becomes a matter of high intereſt to know, whether its powers are uniformly and poſitively deſtructive; or, whether it be poſſible to apply them to ends the moſt uſeful and ſalutary. If its powers be found to admit of a beneficial application, let them command the protection of men of ſcience: if they be injurious, let them be doomed to diſuſe by the ſame authority. Let not the diſcuſſion of the queſtion be embarraſſed by narrow jealouſies, but let it aſſume an open complexion, diſtinguiſhed by accuracy of experiment and cloſeneſs of obſervation. In diſquiſitions which embrace a large portion of the deſtiny of man, it is pitiful to ſee talents employed in peeviſhly frittering away the attainments of their cotemporaries, rather than in a manly and diſpaſſionate purſuit of uſeful knowledge. I venerate every improvement, the tendency of which is to ameliorate the condition of us all; but I beg leave to expreſs my aſtoniſhment, that the ſubjects of *Vaccine Inoculation*, and the *antisyphilitic virtues of the Nitric Acid*, ſhould engroſs the attention of almoſt all the medical part of Europe; and that the inquiry reſpecting the curative agency of the *Digitalis* ſhould ſtill be confined to a few names and to a few places. Since the introduction of the *variolous contagion* by means of *inoculation*, very few, comparatively, have periſhed by that diſeaſe; ſince the period that the *antisyphilitic* powers of *mercury* were generally acknowledged, a very ſmall proportion of thoſe labouring under *venereal complaints* have fallen victims to their malignity: But it is ſaid, that *eighty thousand* of the inhabitants of this iſland periſh annually by *pulmonary consumption*; and yet an inveſtigation of the means by which this gigantic evil may be obviated, excites only a very partial intereſt among the profeſſors of the healing art.

I tranſmit

I tranſmit to you the following additional caſes, in which the *Digitalis* was ſucceſsfully employed; and am,

GENTLEMEN,

Your's, obediently,

Bradford, Aug. 15, 1800. GEO. MOSSMAN.

CASE XII.—Sept. 24, 1799, N. H. æt. 19, for ſix months previous to this date has laboured under *phthiſical ſymptoms*, accompanied by a conſiderable *enlargement of the abdomen*. She complains of a teazing cough, difficulty of breathing, alternate chills and heats, great thirſt, loſs of appetite, ſtrength and fleſh. Her abdomen is much tumefied, and ſhe experiences much foreneſs from preſſure; her urine has very generally been high coloured, and her complaints have been all along attended by an occaſional irregularity in the ſtate of her bowels; her pulſe is 120. She has had a reſpectable medical attendant and by him ſhe has been treated with ſmall doſes of the *Fox-glove*, and ſome preparation of *ſteel*; from which, however, ſhe thinks ſhe has not derived any conſiderable advantage. I adviſed her diet to conſiſt principally of preparations of *milk*, *eggs*, and *animal food*; I alſo directed *frictions* to be applied to the region of the abdomen; and ordered for her the ſubſequent formula:

℞. Calomel gr. xv. Fol. Digital. *recenter pulverizat.* ℈j. Miſce et adde Conſerv. Cynoſbat. q. s. ut fiant pilulæ lx.—Sumat j. quater in die.

Sept. 27th. She is now obviouſly under the influence of the *Digitalis*, more in conſequence, I apprehend, of what ſhe took previous to my ſeeing her, than from the quantity of the plant which ſhe has taken ſince. She complains much of giddineſs, and a dimneſs of viſion; ſhe experiences a faintneſs at her ſtomach, approximating to a ſlight nauſea; her pulſe is 58, with a little intermiſſion; her cough is better; and ſhe thinks that ſhe is ſomewhat diminiſhed in ſize. The rigors and ſucceeding heats, ſhe ſays, have left her; and her thirſt is conſiderably abated.

Oct. 2d. Yeſterday morning ſhe was ſuddenly ſeized with vomiting, which continued for the whole of the day, and abated towards the evening, without her having recourſe to any antidote. Her pulſe is 50, with very conſiderable intermiſſion; her abdomen is perceptibly leſs; and in other reſpects ſhe is much the ſame as at my laſt viſit.

Oct. 11th. The vomiting had recurred on the 7th, with greater violence than before, and had continued for the ſpace of nearly forty-eight hours. When ſhe was firſt ſeized with vomiting, ſome anti-emetic medicine might have been tried; and

although I have very frequently seen vomiting produced by the system being incautiously overcharged with *Digitalis*, yet as I never witnessed any attendant phænomena which excited in me any considerable degree of alarm, I was not particularly ambitious to obviate this effect. Dr. WITHERING has mentioned as antidotes, *brandy and laudanum*; but he seems to place his chief dependence on the application of a *blister* to the region of the stomach. My patient's pulse is now reduced to *thirty-eight strokes of the artery in a minute*, and though tolerably full, is extremely irregular; the tumefaction of her abdomen is nearly gone; every other morbid symptom is evidently on the decline; she appears now to be approaching to a state of convalescence. Her pills are to be repeated, and she is to take only two of them daily.

I did not see her again till the 26th, when I found her very much improved. She told me, that the vomiting had again returned; and though not with the same violence as it had done before, yet that it had continued to recur occasionally for a week. I had previously remarked, that every attack of vomiting had been followed by beneficial effects; and it was apparent that this last had been succeeded by a very perfect state of convalescence. Her appetite is good; she is daily improving in strength; her pulse is 50. She expressed some fear of a relapse, and she purposes to take a pill or two every day till she is completely restored. About a month afterwards I saw her in health, and following her ordinary employment: I am informed, however, that about the middle of March last she again became indisposed, and again had recourse to her pills. What symptoms she laboured under, I know not; but from the circumstance of her having again applied to her former medicine, it is probable that she thought her complaints similar to those with which she had formerly been afflicted. How long she took the *Digitalis* a second time, and what its effects were, I have never heard; I am informed, however, that she was prescribed to by another physician. She is since dead.

CASE XIII.—Jan. 17, 1800. E. B. æt. 18, was seized on the 14th with violent rigors and other symptoms of pyrexia. She now complains of an acute pain in her left side; a hard, dry cough; great difficulty of breathing; and excessive thirst. If she attempts to lie down on either side, her cough is much aggravated, and she instantly experiences a sense of suffocation. She is supported by pillows, in a posture almost erect. Her tongue is much furred; her urine is high coloured; her bowels are tardy; her pulse is 110. She has been bled in the arm, and she has taken saline medicines from her medical attendant. I advised

adviſed a dozen *leeches* to be applied to the region of the *thorax*, and the greateſt number to be applied in the vicinity of that part of her ſide where the pain was ſo acute. I next ordered her *chest* to be covered with a very large *blister*: I then directed her to live on *toast and water* excluſively, but to drink even that ſparingly; and I preſcribed for her a grain of the *Digitalis*, with a ſmall portion of the *Pulv. e Tragacanth. C.* to be taken in a ſolution of *Sal. Nitri* every three hours.

Jan. 18th. The blood diſcharged by means of the *leeches* was very conſiderable, without affording her much apparent benefit. The *blister* has operated well, without materially relieving the difficulty of breathing, which is now uncommonly diſtreſſing; her thirſt is extreme; her cough is inceſſant, and is accompanied by a dark-coloured, greeniſh expectoration; her tongue is loaded with a thick, brown fur; her countenance is marked by a ſingular anxiety, and there is an apparent tendency to delirium; her pulſe is 120, with a ſlight intermiſſion. She has juſt had an alvine evacuation. I adviſed a continuance of her medicines and regimen.

Jan. 19th. Laſt evening, towards the approach of midnight, ſhe experienced an aggravation of all her ſymptoms; and to thoſe already enumerated was ſuperadded a very harraſſing *singultus*. After paſſing a moſt dreadful night, ſhe ſunk into repoſe about four or five o'clock this morning; ſhe continued in that ſtate for ſeveral hours, and awoke refreſhed. She has had no conſiderable evacuation by the kidnies, the bowels, or ſkin; and yet there is a very evident abatement of every morbid ſymptom. Her difficulty of breathing is much relieved; her cough is leſs teazing, more free, and the matter expectorated looks better than before; her countenance is more natural; her tongue is much more clean. She can now lie down in a ſituation approaching to a horizontal one, and can, without much uneaſineſs, turn a little to either ſide. Her pulſe is reduced to 96 ſtrokes in the minute.

Jan. 20th. She has had an eaſy night, and again ſhe has enjoyed ſome refreſhing repoſe in the morning; ſhe breathes with much eaſe, and ſhe can, without much inconvenience, lie down on either ſide; her cough continues to be more relieved, and ſhe expectorates freely a mucus of a laudable colour; her urine is more pale, and depoſits a ſediment; her pulſe is 65. I enjoined the uſe of her medicine three or four times a day for a few days longer, as alſo her low regimen; I then took my leave of her. I ſaw this girl about a fortnight afterwards in the moſt complete health.

Case XIV.—Feb. 4, 1800. G. L. æt. 35, on the evening of this date was seized with rigors, and other febrile symptoms. A respectable practitioner was consulted, who immediately directed him to have an *emetic*. This draught operated well, but soon after its operation the patient expectorated a little blood. His pulse was 120.

Feb. 5th. This morning he took an aperient draught with the *Pulv. Prophylact.* which was followed by powders composed of *Sal. Nitri*, *Pulv. Antimonial. Lond.* and *Pulv. e Tragacanth. C.* One of those powders was directed to be taken in a proper vehicle every two or three hours. His pulse and other symptoms were as before.

Feb. 6th. He had taken six of the powders above prescribed. He complained of an acute pain in his left side, attended by an extreme difficulty of breathing, distressing cough, and bloody expectoration. He had a *blister* applied to his chest, and was ordered four grains of the *Digitalis* in six powders, to be consumed in twenty-four hours.

Feb. 7th. He had taken his powders with the *Digitalis*. His pain was relieved by the *blister*. His breathing was still laborious, and the hæmoptysis continued to recur as before. The powders were repeated.

Feb. 8th. I saw this patient for the first time this morning, accompanied by his medical attendant. He laboured under a well-marked case of *pneumonic inflammation*. In addition to the common phænomena which characterise that disease in its most alarming form, I had reason to apprehend a supervention of delirium. A singular rapidity marked his looks and actions. His pulse was 120; his respiration was laborious; his thirst was extreme; he continued to expectorate pure arterial blood. I directed him to drink frequently of cold water; I repeated his powders, with an additional quantity of the *Pulv. Antimonial. Lond.* to be taken in a solution of *Sal. Nitri*.

Feb. 9th. He had passed a much easier night. The pain of his side had abated considerably; and the difficulty of breathing was much relieved. The expectoration of blood, however, did not appear to be lessened in the smallest degree, though his pulse was reduced so low as 70 strokes in a minute. His medicines were repeated.

Feb. 10th. This morning exhibited a phœnomenon which struck us with astonishment. His pulse was full, regular, and *beat only forty strokes in the minute*. Every morbid symptom had begun then to disappear; and the hæmorrhage from his lungs was now much lessened, though he still continued occasionally to discharge blood. The medicines were repeated.

Feb. 11th. He appeared in a state of convalescence. His pulse

pulse was still *forty*. We discontinued his powders; and he began to take a julep composed of *Conserv. Rosar. &c.* acidulated with the *Acid. Vitriolic. Dilut.* He took this julep till the 16th, at which period all his complaints had ceased. His pulse, however, still continued at *forty*; and it was not till some time afterwards that it recovered its usual velocity. This patient has ever since enjoyed the most perfect health.

Case XV.—June 27th, 1800, B. C. ætat. 50, was suddenly seized with violently marked symptoms of *pneumonia*. An intelligent practitioner in the neighbourhood was consulted for him, but what medicines he gave him I know not. On the evening of July 1, I visited him, and found him labouring under symptoms very similar to those described in Case 13. I pursued a similar practice, and with equal success; a detail of the minutiæ is therefore unnecessary: but I ought to observe, that in this case the morbid symptoms were combated with much difficulty; the issue of the disease hung in suspense for upwards of a week; *and during the whole of that period he took daily from eight to twelve grains of the Digitalis in its most active state.* I visited him every morning, and with the most anxious impatience I expected the usual operation of the plant. It at last exerted its influence over him, and all his complaints disappeared. A few days ago I saw him in health.

Case XVI.—August 4, 1800, J. B. æt. 35, was suddenly seized with symptoms of *pneumonic inflammation*. The whole region of the thorax was attacked by violent shooting pains; his thirst was great; the difficulty of respiration was extreme; his pulse beat 100 strokes in the minute. His apothecary took from him twelve ounces of blood, which exhibited a thick sizy surface. During that day he took powders composed of *Sal. Nitri* et *Pulv. Antim. Lond.* and in the evening a grain of *Digitalis* was added to each powder, and they were directed to be taken every three hours. At this period he complained of a most tormenting pain in his left side, which was covered with a *blister*.

Aug. 5th. This morning every morbid symptom was apparently increased. The pain of his side, he said, was much abated; but he now experienced the most excruciating sensation immediately under the *sternum*. The same quantity of blood was taken as before, and the same medicines were continued.

Aug. 6th. There was still an aggravation of the morbid symptoms. His pulse was 110; his thirst was extreme; his tongue was covered with a dark coloured fur; the difficulty of

of respiration was great; his urine was remarkably high coloured; he laboured under the constant recurrence of a bilious diarrhœa. Blood was again taken from his arm.

Aug. 7th. The operation of venæsection was once more performed. I saw him, for the first time, this morning. His pulse was irregular, and beat 120 strokes in the minute; he laboured extremely in his breathing. He was laid upon his back, supported by pillows, nor could he for a moment bear any other situation. His cough was hard, hollow, incessant; and when he expectorated any thing, it resembled a dark green or brown serum. His countenance appeared sunk, and indicative of approaching dissolution. He faultered in his speech, and there was a supervention of a slight delirium. I covered the whole surface of the *thorax* with a *blister*, and I prescribed the following formula:

℞. Fol. Digital. *recenter pulverizat.* ℈ss. Opii puri pulv. gr. iij. Pulv. Antimonial. Lond. ʒss. Sal. Nitri ʒj. tere et divide in chartulas xii.—Sumat j. quaque 2nd. hora in cyatho aquæ gelidæ.

Aug. 8th. Appearances this morning were rather more favourable. His pulse was reduced to 110, and was more regular; nor did he experience the same lancinating pains in his chest. His *blister* had excoriated the whole surface of the *thorax*; and had induced a most violent *strangury*, which was relieved by the exhibition of *mucilages*. He had taken his medicines with great regularity; and the cool regimen, enjoined at the beginning, was scrupulously observed.

Aug. 9th. He had passed a better night than usual. His pulse this morning was reduced so low as 96. He had not had so many bilious evacuations; but there was an appearance of yellowness in the *tunica albuginea* of his eyes; and his tongue began to be covered with a yellow crust. His respiration was certainly more easy; his cough was neither so constant, nor so painful; and the matter expectorated had assumed a more laudable colour and consistence. A violent *singultus* had attacked him in the night, and still continued to harrass him extremely. I directed him to have the following medicines:

℞. Calomel. Fol. Digital. *recenter pulverizat.* a. gr. ss. Pulv. Antimonial. Lond. gr. iij. Conserv. q. s. ut fiat bolus, quaque 2nd. hora sumendus cum Decoct. Nitros. ʒj. I also advised an *anodyne* at bed time.

Aug. 10th. He had passed an easier night. The *hiccup* was not so violent, nor did it recur so frequently as yesterday; his pulse was reduced to 84 strokes in a minute; his tongue was more clean and moist. He expressed a desire to have a little food. He was now obviously under the influence of the *Digitalis.*

talis. Indeed, I am inclined to aſcribe to its operation the occurrence of *singultus.* This laſt ſymptom continued occaſionally, for ſeveral days, to harraſs him, but was repeatedly, and very effectually obviated by the exhibition of *Sp. Nitri Dulc.* His pulſe began, from this period, to be reduced in point of frequency, till it approached its uſual ſtandard. Every morbid ſymptom diſappeared, and he was reſtored to the moſt complete health.

[To be continued.]

Strictures on the usual Practice in Strangulated Hernia.
By Mr. GEOGHEGAN.

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

HAVING ſucceeded in reducing ſeveral inſtances of Strangulated Hernia by the taxis, where the ſymptoms were ſo alarming as to point out the neceſſity of immediate operation; I take the liberty of communicating, through the medium of your Journal, the practice which I purſued, and the principles upon which it was founded. I am the more deſirous of exciting the attention of practitioners to this diſeaſe, from a conviction that the practice recommended by the lateſt writers of character on this ſubject, is productive of the moſt dangerous conſequences; Mr. Bell, whoſe work is in the hands of every ſurgeon, lays it down as a maxim, that we ought always to proceed to the operation, if after a few hours, two or three at the fartheſt, the remedies generally recommended do not prove effectual; and he does not think the operation, abſtractedly conſidered, attended with great danger. If we conſult the records of practice, ſurely we ſhall find a hoſt of evidence of the fallacy of this author's maxim; I am confident that the experience of every practitioner is in direct oppoſition to it; I have met with numberleſs inſtances, in which not only ſeveral hours, but days, have paſſed over before a reduction by the taxis could be effected in Strangulated Hernia, attended with ſingultus, vomiting of feculent matter, &c. and afterward the protruded parts were reduced without operation. Similar caſes have occurred to every experienced practitioner with whom I have communicated on the ſubject; and as to the queſtion, whether the operation is to be held as dangerous, abſtractedly conſidered, I

aver that it is imminently so. We know that the danger attendant on every operation of consequence, turns as much upon the peculiarity of the patient's constitution, independent of the disease which it is intended to relieve, as on any other circumstance; the most minute consideration therefore should be given to every means of relieving, before it is had recourse to in any case. In the present instance, a subject in full health is suddenly laid prostrate, attacked by a painful affection, which exceedingly deranges the entire system, not habituated to it by gradual suffering; a desideratum preparatory to an operation. Experience instructs us he can ill bear any violence; his intestines are to be exposed to the air, a tendinous part to be wounded, and air may be admitted into the cavity of the abdomen; beside the effects which a slow dissection must produce on a subject just removed from a state of health, surely nothing can be more obvious than that such cases are in principle exceedingly dangerous. The instructions which are given by Mr. Bell and Mr. Pott, as to the method of reducing by the taxis, appear to me not only imperfect but injudicious; they direct that the patient being properly placed, "the surgeon is to grasp the inferior part of the hernia with one hand, and push upwards, whilst he endeavours with the fingers of the other to push forward the parts at the superior part of the tumor." Let us for a moment consider the state of the parts; a portion of intestine lies without an aperture, through which it is too large to pass; the question then arises, what occasions its bulk? Surely, the nature of the part, the touch, and all the circumstances of the case, clearly evince it to be flatus, and sometimes together with excrement and an inflamed intestine, whose functions are so far deranged that it cannot act upon its natural contents, so as to move them in their ordinary course. The abdominal ring is in nowise concerned in the disease, only that as it is too small to admit of the return of the inflamed and inflated parts, it unavoidably girts them; and nothing can be more absurd than the idea of relaxing it, as from its structure it must be passive. Let us suppose a ring fixed upon the neck of an inflated bladder, and that it is desired that the bladder should be passed through the ring, could any thing be more erroneous than to endeavour to push forward, and upwards, or any way, without removing the air which occasioned the resistance? The cases are similar, and nothing can be more obvious than that every effort should made to lessen the bulk of the hernia, and none to push it through the ring; it will pass in of itself after the air has been extricated. It is observed by those authors, that a guggling noise is always heard on the passing up of the intestine, which they merely mention, but do not insist upon, as the great and principal circumstance to be attended

attended to in forming a juſt opinion of the mode of treatment. The mode of practice which I purſue, founded on the preceding principle, is as follows: I expoſe the entire body to the cold, naked, open the windows, &c. and apply cloths to the part, wet every ten minutes with a ſolution of muriated ammonia in vinegar and water; if ice can be procured, I prefer it. The patient generally complains much of the cold, and ſhivers, a deſirable circumſtance, as it induces ſuch a collapſe of the entire ſurface, as greatly to aſſiſt our intention of condenſing and expelling the air from its impriſonment, after about an hour ſpent in this way without touching the parts with the hands, or any effort by the taxis, as generally practiſed. Let the palms of the hands be applied to the ſides of the hernia, gently to preſs them towards each other, with a view to aſſiſt in propelling, not the inteſtine, but its contents, the air, &c. through the ring. In one inſtance, I ſucceeded in this way on the eighth day, in another on the ſixth, after the ſtrangulation had ſet in in both, attended with vomiting of feculent matter, hiccup, &c. Many efforts had been made in the uſual way of endeavouring to force the inteſtine upwards and forwards, which, I am of opinion, always exaſperates the ſymptoms. In another caſe, the diſeaſe had exiſted about twelve hours; the volume protruded was immenſe, and the ſymptoms ran exceedingly high; the patient was of a remarkably robuſt habit. After taking off about 20 ounces of blood, and having applied the cold ſolution for ſome time, I endeavoured with my hands to aſſiſt in extricating the air, but was unſucceſsful. Being obliged to go away, I directed that he ſhould remain naked, expoſed to the cold, and to perſevere in the cold fomentation. On my return, after half an hour, his rupture had diſappeared. He told me that he heard a noiſe as if wind had ruſhed out of it, and that it went up of itſelf. Some practitioners apprehend danger from the application of cold to a part ſo much inflamed; but the ſcrotum and ſac are ſecure intermediums to moderate its operations on the inteſtine; and experience proves that danger is not to be dreaded. From theſe conſiderations, I preſume, it is obvious that the directions given by moſt authors are not calculated to produce the deſired effect, particularly the operation of puſhing the inflamed and inflated parts through the ring, which is, *prima facie*, impoſſible; that the practice of condenſing and extricating the air, has a rational foundation; and that the ſole attention of the ſurgeon ought to be directed to that end.

I preſume it is underſtood that Bubonocele is the term of the diſeaſe I treat of.

EDWARD GEOGHEGAN,
Member of the Royal College of Surgeons in Ireland.

Dublin, Aug. 12, 1800.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

ON peruſing your valuable periodical Work, I have obſerved a diſcordancy of opinion relative to the expediency of the extraction of the placenta, which has induced me to preſent you with a few obſervations on that ſubject.

Naturam expellas furca tamen uſque recurr t. HOR.

It will ſcarcely be thought neceſſary to trace the different opinions which have been advanced on this ſubject, from the remoteſt periods of antiquity to the preſent day; nor would a knowledge of the practice of the ante-diluvians, or even the method adopted by our firſt parents with regard to their children, illuſtrate the point in diſcuſſion; for as they were in a ſtate of Nature, it is natural to conclude, (ſetting aſide the interpoſition of Providence) that no manual aſſiſtance for the extraction of the placenta, at ſo early a period of time, was neceſſary; and if the human race had exiſted in a ſtate of Nature to the preſent time, it is highly probable, there could have required no other aid for the extruſion of the placenta, than what was natural to every ſpecies of animal in their primordial ſtate: and as the female of every animal in a ſtate of parturition is poſſeſſed of a placenta, or ſubſtance analogous thereto, it might, on a ſuperficial view, lead us to conclude, that no difficulty would ariſe from its retention amongſt the brute creation, ſeeing they approach nearer to a ſtate of Nature than the human; but, upon a more careful attention to their various ſtages of parturition, we ſhall find them labouring under certain difficulties, though, perhaps, in a leſs degree than what falls to the lot of woman.

It has been obſerved by various authors who have had opportunities of viſiting the moſt uncivilized parts of the globe, where the inhabitants live in a great meaſure in a ſtate of Nature, that the women ſuffer comparatively little with thoſe of the European countries.*

The difference then attendant on human parturition is more aſcribable to certain modes of living, and deprivations in ſociety, than to any phyſical neceſſity, or curſe announced by the

* Vide Long's Hiſtory of Jamaica, Vol. II. page 380. "Their women are delivered with little or no labour; they have, therefore, no more occaſion for midwifes than the female Oranoutang, or any other wild animal. A woman brings forth her child in a quarter of an hour, and goes the ſame day to the ſea and waſhes herſelf."

the Deity to our firſt parents, as a puniſhment inflicted upon the fallen nature of man.*

There is no occaſion then to aſcribe evils to our firſt parents, which we daily bring upon ourſelves, nor blame the benevolent hand of Providence in cauſing us to go erect, though Dr. Oſborn, page 9th, ſays, the erect poſition of the human frame, that ſingular mark of pre-eminence, expoſes women to pain and difficulty in natural parturition, from which the ſubordinate quadruped is almoſt entirely exempted, by the horizontal poſition of her body. Surely ſuch an idea will never be generally credited; the cauſe muſt ariſe from circumſtances of a more adventitious nature, and not from any pre-eminence of poſture, or inevitable phyſical evil; even a ſuperficial view of the preſent ſtate of human nature will eaſily convince any one of the origin of this depravity.†

Whoever takes the trouble of collecting the various opinions advanced by authors on this ſubject, from the time of Hippocrates, will have reaſon to lament that this branch of midwifery ſtill remains a point unſettled amongſt accouchers; and as the event of the mother ſo often turns on a right or wrong mode of managing the delivery of the placenta, ſurely it will not be deemed an uſeleſs undertaking in me, to condenſe into a narrow compaſs the mode of practice I have hitherto adopted with ſucceſs.

On peruſing the books of Celſus, Ambroſe Parey, Mauriceau, Pugh, Deventer, Mawbray, Roederer, Aſtruc, Dionis, Burton, Chapman, Counſelo, Exton, Maningham, and Giffard, I find them recommending an early extraction of the placenta, ſome of whom adviſing the introduction of the hand, even before the diviſion of the funis, fearing the internal orifice of the womb ſhould cloſe and obſtruct the extraction; but this,

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† Dr Oſborne ſeems to rely much on the Moſaic account, that "in ſorrow thou ſhalt bring forth children." If this were the caſe, it would be applicable, in an equal degree, to every parturient female in all quarters of the globe; but this we find does not take place, for it is not very uncommon in this country, to obſerve a labour terminate with little or no appearance of pain, nor the leaſt degree of ſorrow, but ſometimes even emotions of joy may be obſerved upon the countenance. And we read in Wafer's Deſcription of the Iſthmus of America, page 360, that, "When a woman is delivered of a child, another woman takes it in her arms, within half an hour or leſs after it is born, and takes the lying-in woman upon her back, and goes with both of them into the river and waſhes them there." The Brazilian women have very eaſy labours, and as ſoon as they are delivered, they go to the river and waſh themſelves without harm. Vide Newhoff's Voyages, p. 151.

† See Hufeland on the Art of Prolonging Life, Vol. II. page 9, chap. 1; and Dr. Gregory's Comparative View, ſect. 1.

this, amongſt many other abſurd cuſtoms, is now entirely exploded. But as it is natural to ſuppoſe, that each practitioner in midwifery is ſtrongly enliſted to the practice of thoſe from whom he has been inſtructed in the art, we need not be ſurpriſed at the diverſity of opinions which ſtill prevail, nor even wonder at the various ſucceſs attendant thereon. A thorough knowledge of the anatomy of the gravid uterus in every ſtage of parturition, is an indiſpenſible requiſite to every accoucheur, and will prove a barrier againſt a hoſt of difficulties and embarraſsments which frequently occur in practice.

There are two oppoſite prevailing opinions at this day, reſpecting the moſt advantageous mode of delivering the placenta; ſome adviſing, in all caſes, the manual extraction immediately after the birth of the child; others* purſue a different plan, making gentle efforts by pulling at the funis for ſome time; and if this fail, the extraction is then accompliſhed by manual aſſiſtance.

There are a few, alſo, who think no harm enſues from truſting its extruſion intirely to Nature in every inſtance. Were it poſſible from ſuch a diverſity of opinions, to adduce a true eſtimate of the advantages and diſadvantages attendant on theſe various modes of practice upon the moſt enlarged ſcale, I fear more harm than good would be found to reſult from ſuch a calculation, if contraſted with a ſimilar computation, and where the woman was totally left without the leaſt aſſiſtance.

Though the exit of the placenta, were it left entirely to Nature, would ſeldom require manual extraction, yet, as the powers of the uterus are often limited, and as urgent ſymptoms ſometimes occur, it will generally be acknowledged, that the aſſiſtance of art, in theſe caſes, becomes equally neceſſary as in any branch of ſurgery. Soon after the birth of the child, the uterus in part contracts upon the ſubſtance of the ſecundines, by which inherent power of contraction, aſſiſted by the action of the abdominal muſcles, the placenta is generally expelled naturally in the ſpace of ten or fifteen minutes. When the efforts of Nature are all ſufficient to accompliſh this work in the above-mentioned time, it will be uſeleſs to obtrude the hand into the uterus for the purpoſe of extracting the placenta, before having firſt had reaſon to doubt the ſufficiency of the expulſive efforts of that organ. If after waiting the time above ſpecified, and the uterus aſſumes no diſpoſition to diſlodge its contents,

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* Amongſt whom are Smellie, Hamilton, Baudelocque, Johnſon, Denman, White, Foſter, and Perfect.

contents, it may then be proper, after placing the patient in a horizontal position, to introduce one or two fingers of one hand up the vagina uteri, whilſt with the other we take hold of the funis and make a gentle diſtenſion, by which means we ſhall be enabled to aſcertain the ſtate of the os uteri and ſituation of the placenta. If the mouth of that viſcus ſhould be found in a relaxed condition, and the placenta within reach of the finger, we need not deſpair of promoting its expulſion, by making a gentle preſſure upon the abdomen with one hand, and cautiouſly pull* at the funis with the other, in a direction with the axis of the pelvis; this mode of acting will generally ſtimulate the uterus, and ſeldom fail to ſolicit the expulſion of the placenta. But when no flooding, or other urgent ſymptoms occur, and when the extruſion of the placenta does not follow, we may with ſafety deſiſt from theſe gentle efforts, and wait even two, three, or more hours, before any further attempts are made for its extraction by artificial means.

When the placenta is thus detained, there is ſeldom any hæmorrhage during that interval; but when the pains recur, and the placenta becomes detached from the uterus, a degree of flooding will ſupervene, and our conduct muſt be regulated accordingly.

In caſes where the placenta is only in part detached from the uterus, we may naturally expect a leſs diſcharge to enſue, than where the whole of the placenta adheres to that viſcus; conſequently, it will be more prudent to wait for the natural excluſion of the placenta in the latter caſe than in the former; it, however, not unfrequently happens, that the uterine actions are irregular, as in the caſe of flooding and ſyncope, or after a tedious labour; in which caſe, our conduct muſt be governed by attendant circumſtances, and the quantity of blood loſt in a given time. I would not have it underſtood, that every diſcharge of blood from the uterus is a ſufficient juſtification for the immediate extraction of the placenta in every inſtance; ſometimes a diſcharge of *coagula* will take place, in which caſe it becomes neceſſary to aſcertain the quantity and quality of the diſcharge before manual aſſiſtance be attempted. An uterine hæmorrhage taking place immediately after the birth of the child, and continuing without intermiſſion to diſcharge florid blood from the mouth of the uterine veſſels which open into its cavity, is, in itſelf, ſufficiently alarming, and calls for immediate aſſiſtance by art.

It

* It is a rule with me, never to exert a greater force upon the funis for the purpoſe of extracting the placenta, than what is adequate to ſupport its own weight, leſt a rupture or laceration ſhould take place.

It ſometimes happens, that only a circumſcribed portion of the placenta is detached from the uterus, whilſt the membranes adhering around may confine the blood for a certain time and prevent hæmorrhage.†

In every caſe requiring manual extraction, the ſeparation of the placenta from the uterus ſhould be undertaken with the greateſt caution; a gentle preſſure with one hand upon the hypogaſtric region, to ſteady the uterus, will much facilitate the extraction. If an hæmorrhage ſhould ſupervene the exit of the placenta, it will be found of ſervice to adminiſter a glyſter, compoſed of four ounces of cold water, and eighty drops of tinct. opii; or an aſtringent injection may be thrown into the uterus to moderate the diſcharge; and in caſes when the whole or part of the placenta remains in the womb for ſome days after the delivery of the child, it may be proper to force injections of warm water, or Port wine, into the uterus from time to time, to bring away any putrid *coagula* that is lodged in the uterus or vagina; this may alſo aſſiſt in promoting the expulſive efforts of the uterus, and diſlodge the placenta. The adheſion of the placenta will ſometimes be ſo great as to reſiſt theſe gentle attempts for its expulſion; in which caſe it becomes neceſſary for the accoucheur to determine whether manual extraction, or abandoning its exit wholly to the efforts of Nature, have a preference: In this caſe every practitioner muſt be guided by circumſtances, as the putrefaction of the placenta, when retained in the cavity of the uterus, is certainly a matter of conſiderable moment; yet, whilſt the whole of the placenta remains firmly attached to the uterus, that proceſs can only take place ſlowly: But, on the contrary, when that redundant maſs becomes putrefied, it naturally follows that a ſeparation, or as it were an exfoliation takes place, and that vital organ, the uterus, diſcharges the dead maſs. From hence will be perceived, how difficult it is to lay down any determinate rules to be invariably followed in every caſe, yet a prudent practitioner will ſeldom be at a loſs how to act; it is however a deſirable event, and what I ſhould wiſh to inculcate, that the expulſion of the placenta ſhould generally be urged to follow the delivery of the child in a longer or ſhorter time, according to the emergency of the caſe. The detention of the placenta ſometimes ariſes from an atony of the uterus, or an irregularity of contraction of the muſcular fibres, aſſuming various ſhapes; in ſome caſes, the mouth of the uterus has been found contracted upon the funis ſoon after the birth of the child; in others

† Albinus mentions a caſe of this kind.

others it assumes the form of an hour-glass, and is contracted in the middle, and the placenta is lodged as it were in a cyst beyond this second entrance; these and other spasmodic contractions have been observed by different authors, and seem more liable to affect some constitutions in a greater degree than others. Smellie enumerates several instances which sufficiently illustrate this fact. Perfect gives an account of a lady, who suffered from a retention of the placenta in six succeeding labours, in some of which it was retained till the third, and in one as long as the fourth day, see Vol. i. p. 91; see also Vol. ii. of the same author, where are several cases related of a similar nature, p. 377, 379, 381, 383, 387, 392, 393. As it is a satisfaction to adduce the opinion of so eminent a teacher of Midwifery as the late Dr. Colin Mackenzie on this subject, I will transcribe his answer to the 137th case, p. 383 of Perfect's Midwifery, Vol. ii.

" Dear Sir,

" As a flooding preceded the delivery, dangerous consequences might have been expected from forcibly extracting the placenta; it was a precipitate measure by which the hæmorrhage most probably was much increased: In such cases, I have often allowed an hour, sometimes an hour and a half; and without the symptoms are urgent, this will always be found the safest way. It is an idle prejudice, which obtains in respect to the retention of the placenta; in most cases it is much safer, that it should entirely be left to Nature, than to risque the dangers which attend its forcible extraction; and yet it is often very disagreeable to submit its exclusion to Nature; but it must be remembered, that in great force there is more than proportionable danger of doing injury to the uterus; the medium between these two extremes, if any, will perhaps be found the best guide to our practice."

" I am, &c."

Exton mentions a case of contracted uterus: " As soon," says he, " as I had separated the child I immediately passed my hand, which is my constant practice, and found the mouth of the womb so strongly contracted that I could by no means introduce even a finger into it. I endeavoured to open the os uteri by passing a finger; but the contraction was so very strong, that I believe the mouth of the womb would sooner have been broke than yielded to my fingers. By the feel, it was like a purse strongly drawn up. After waiting twenty-four hours, (he adds) I perceived that the os uteri was quite relaxed, and fetched the placenta whole, without any difficulty." See p. 111. The same author, speaking of the spasmodic

contraction of the os uteri taking place inſtantaneouſly after the birth of the child, ſays, "This, I think, is the only caſe that forbids an immediate extraction of the placenta, becauſe of the great danger there is of hurting the woman, by being obliged to make uſe of too much violence." See p. 134. At pages 137, 138, and 139, are three more caſes of contracted uterus related.

Mr. White, in his Treatiſe on the Management of Pregnant and Lying-in Women, relates ſeven caſes where the placenta was retained by a ſpaſmodic affection of the uterus. See fifth edition, p. 443, Caſe 21, where mention is made of the placenta not being expelled till the ſeventh day after delivery, and the patient recovered. More caſes of the ſame ſpecies are mentioned by the ſame author; ſee p. 305, 307, 308, 309, 310.

Dr. Johnſon relates a caſe where the uterus was violently contracted, about mid-way between the orifice and fundus; yet, after much difficulty, he gained admiſſion by introducing the hand, and extracted the placenta with ſafety to the mother. See p. 26.

La Motte has ſeven caſes of this ſort. Vide his Obſervations, p. 358, 359, 362, 363.

Giffard relates two caſes of contracted uterus. See p. 263, caſe 107; and p. 303, caſe 127.

Burton mentions a caſe of ſpaſmodic affection of the uterus, of the ſand-glaſs form. See p. 132.

Chapman relates two ſucceſsful caſes of contracted uterus, in one of which the placenta was extracted after five days retenſion. See p. 158.

Dr. Denman makes mention of a caſe where the placenta was retained till the fifteenth day after the birth of the child; but is ſilent as to the event.

In a manuſcript copy of a courſe of Lectures which I poſſeſs, from Dr. Young, of Edinburgh, there is related an inſtance of retained placenta from the ſame cauſe: "The woman had been two hours brought to bed, and all the different methods had been uſed in order to extract the placenta. The cord was broke; I put the woman upon her ſide, and introduced my hand, but could not get hold of the placenta; I got my hand up to it but no further, the uterus having formed a ſort of pouch for it; ſo that at laſt I was obliged to truſt the matter to Nature; and, what was very uncommon, no fœtid diſcharge followed, nor any thing like the placenta, and yet the woman recovered, and did very well."*

* A ſimilar caſe is mentioned, and where no dangerous ſymptoms followed. See Niſbet's Clinical Guide, Part iii. p. 145.

I myſelf

I myſelf once witneſſed the ſpaſmodic diſpoſition of the neck of the uterus in a great degree; immediately after the head of the fœtus was emerged at the valva, the os uteri encircled round the neck of the fœtus like a collar, inſomuch that the fœtus was ſtrangled, and it was impoſſible to extract the body, or even to introduce one finger between the os uteri and neck of the child. I adminiſtered a large doſe of tinct. opii, which counteracted the ſpaſm, and the labour was terminated, with ſafety to the mother, in about the ſpace of two hours from the firſt appearance of the ſpaſm. Were it neceſſary I could adduce more caſes of ſpaſmodic affection of the uterus; but it will be perceived, by referring to the abovementioned authors, that their mode of practice was widely different, moſt of whom ſtrenuouſly recommend the introduction of the hand, though the os uteri ſhould be nearly cloſed upon the funis, rather than truſting its expulſion to Nature, or waiting for a removal of the ſpaſm, or even attempting to counteract its effects by antiſpaſmodic medicines. An accurate knowledge of the uterine action will, in general, direct the accoucheur to the beſt reſources; for, in caſes of this nature, manual extraction can only be juſtifiable in preſſing emergencies; and as every individual caſe attended with ſpaſm may not require the ſame treatment in every inſtance, it may then be expedient to vary our mode of conduct as occaſion requires; and when the os uteri is ſo far contracted as to render the introduction of the hand impracticable, and no hæmorrhage or untoward ſymptoms occur, I would recommend, in the firſt place, to attempt the removal of the ſpaſm by giving the patient a pill with two or three grains of opium; or, what I have more than once found of greater efficacy, a clyſter compoſed of ninety drops of tinct. opii to four ounces of cold water and a drachm of aſſafœtida, after which the hand may in general be cautiouſly and gently inſinuated into the uterus, and the placenta extracted, taking care not to exert too much force upon the os uteri, leſt inflammation, or laceration of the neck of that viſcus, ſhould enſue.† I am, nevertheleſs, certain, from the muſcular fibres of the uterus being ſo circuitouſly arranged, that it is thereby poſſeſſed of a greater degree of elaſticity than moſt other organs of the human body, and is perhaps alſo leſs ſenſible to injury; this every accoucheur, who has had even a tolerable ſhare of practice, muſt have witneſſed; yet who would

† Fielding Ould is of opinion that the orifice of the womb is not capable of ſo ſpeedy a contraction as is generally imagined, and endeavours to controvert the opinion of Deventer on the ſubject.

attempt the immediate extraction of the placenta, where the uterus is affected with ſpaſm, and no hæmorrhage or other dangerous ſymptoms prevail, before the above means have been employed for its removal. Should the ſpaſm be accompanied with hæmorrhage (which is ſeldom the caſe) we may conclude that a portion at leaſt of the placenta is detached from the uterus, therefore our conduct muſt be guided by the quantity of the diſcharge and ſtrength of the patient; in which caſe we ſhall generally find the introduction of the hand into the uterus more eaſily admiſſible than if no hæmorrhage has accompanied the ſpaſm. If, after the extraction of the placenta is completed, the uterus ſhould remain in an atonic ſtate, ſome degree of hæmorrhage will unavoidably ſupervene, owing to the mouth of the uterine veſſels remaining in a patulous ſtate; and being repleniſhed with blood from another ſource, the muſcular fibres not performing their regular functions, the mouth of the womb becomes in ſome caſes plugged up with coagulated blood, whilſt the uterus becomes diſtended with the effuſed blood to a conſiderable degree; a knowledge of its exiſtence may be aſcertained, either by an examination of the abdominal parieties, or, what is more certain, by the introduction of the hand into the cavity of the uterus; and, to prevent fever and inflammation, the preſence of the hand in that viſcus will be ready to ſcoop out the coagulated contents, and an aſtringent injection may be thrown into the cavity of the uterus; after which the ſwaithing of the abdomen may act as a preventive to a return of the effuſion of blood into the uterine cavity, and alſo ſupply that loſs of preſſure which the ſtate of geſtation had occaſioned. Some authors recommend the plugging of the vagina in this ſtate of torpor of the uterus; how far this may be of ſervice I cannot pretend to determine, as I have never put it in practice.

In caſes of oſſification or induration of the placenta, the preſence of which can only be identified by the introduction of the hand into the uterus, and as there will be a degree of reſiſtance of the contractile ſtate of the uterine fibres at the attached part of the indurated placenta, conſequently any force exerted upon this part for its ſeparation may occaſion hæmorrhage or laceration of that viſcus; hence will appear the advantage of removing only the detached portion of the placenta, and leaving all the morbid parts behind, to be diſcharged per vias naturales, or abſorbed into the ſyſtem by the lymphatics of the uterus. In every caſe, however, where the extraction of the placenta becomes neceſſary, and no morbid affection or other circumſtances occur to preclude its removal, I would urge a total extraction of the whole maſs, when it can be accompliſhed with ſafety to the mother, rather than leaving

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ing any fragments behind, which eventually produce flooding, inflammation, or fever.*

On the other hand, when the os uteri is closely contracted upon the placenta and funis, and several days have elapsed from the birth of the child, and no hæmorrhage ensues, I would caution the accoucheur against making any forcible attempts to introduce the hand before other means have been tried to abate the spasm, as the mouth of that organ will, in all probability, bear less irritation at this period than it otherwise would immediately after the birth of the child. I am,

GENTLEMEN,

Your humble servant,

Blackburn, Lancashire, Aug. 29, 1800.

JAMES BARLOW.

To Dr. BRADLEY.

SIR,

IN one of the Numbers of your Journal, Dr. Stoll's practice of suspending the progress of phthisis, by giving antimonials in nauseating doses, is mentioned; and it appears to be inferred from the success attending this practice, that the different preparations of this semi-metal act in a manner analogous to digitalis. As the attention of the faculty to this powerful medicine has been much increased by your valuable Publication, I have had several opportunities of observing its effects; and I believe myself authorised to conclude, that the *modus operandi* of the digitalis purpurea, is very different from that of the other medicines employed in the cure of pulmonary affections.

Asthma is a disease in which I was particularly induced to administer it, on account of the precarious effects of the medicines usually given. In every case in which it was exhibited, the most violent symptoms were mitigated, and the general

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* Pugh says, "Three times in my practice I have been sent for to women where the children had been delivered three days before, and one four days; and notwithstanding I extracted the placenta, and without using much force, that is, not so much as to either injure the womb or over fatigue my patient, two out of three died, and the other with very great difficulty escaped; and the only reason I can assign was from the putrefaction of the placenta, which was very great, and caused inflammation of the uterus, and brought on putrid fevers, which carried them off, the one on the fourth, and the other on the fifth day after the extraction." See p. 30. Vide also Heath's Baudelocque, Vol. ii. sect. 7.

neral ſtate of health viſibly improved. One effect, however, particularly attracted my attention, which ſhewed how different its action was from that of antimonials, and which took place in every patient, viz. *The expectoration was diminiſhed, and at the ſame time the neceſſity of it ſeemed to be removed.* This effect was ſo remarkable, that ſome of theſe aſthmatic patients, who had at different times received temporary benefit from garlic, ipecacuanha, and other medicines which increaſed expectoration, were ſurpriſed at finding relief from a medicine, the effects of which were ſo oppoſite. It appeared leſs efficacious in relieving the ſymptoms of aſthma, in thoſe caſes in which it produced naufea or vertigo; another ſtriking difference between its action and that of antimonials.

The increaſe of pulmonary abſorption by this medicine, to which Dr. Darwin aſcribes its ſalutary effects, is certainly a more ſatisfactory explanation of its *modus operandi* than any other that has been attempted. But were we to adopt his opinion, that the increaſed action of the pulmonary abſorbents was the effect of the decreaſed action of the ſtomach, we ſhould infer, that this medicine would be more efficacious in proportion to the degree of naufea, or even of vomiting, produced by it; the contrary of which is, however, the fact.

Not having met with a circumſtantial narrative of any caſe of aſthma, in which digitalis was given, as we are not able to procure the medical publications of your country until a conſiderable time has elapſed, I ſhall beg leave to ſubjoin a ſhort account of a caſe, in which its ſalutary effects were ſpeedily and deciſively produced.

Daniel Sheehan, æt. 56, a gardener, had contracted an aſthma about twelve years ago, in conſequence of expoſure to alternations of heat and cold while working in a cellar in this city. The ſenſe of ſuffocation on aſcending an eminence, and the oppreſſion and ſqueezing of the cheſt he felt during the greater part of the night, gradually but ſlowly increaſed until Chriſtmas laſt; at which time having caught freſh cold, theſe ſymptoms were very much aggravated. He called on me in the beginning of May laſt, very pale and emaciated; he complained very much of the ſenſe of ſuffocation, and tightneſs about the cheſt; he ſcarcely ſlept; but after dozing about an hour on going to bed, he awoke very much oppreſſed, was obliged to ſit up in bed during the remainder of the night, and very often believed that he could not live until morning. His pulſe was about 120, and very feeble.

I ordered him fifteen drops of Darwin's tincture of digitalis twice a day. As he lives in a remote part of the city, I did not ſee him for a fortnight; when he called upon me, I was

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ſtruck by the remarkable change in his appearance; he had no longer the wheezing nor oppreſſion about his cheſt; his countenance was much fuller, and his complexion much leſs pale; his pulſe was about 90, and tolerably ſtrong. He told me, that after he had taken the bottle about three days, he no longer felt himſelf obliged to ſit up at night, but was able to take a comfortable nap, after which he felt himſelf refreſhed, a ſenſation with which he had been for ſome months unacquainted. At the expiration of a week, he could ſleep five or ſix hours, and his appetite and ſtrength improved in the ſame proportion; he no longer experiences the neceſſity of ſtopping to take breath on aſcending an eminence. He ſtill continues the medicine; and in his own opinion, and that of his family, his general health is better than it had been at any period during theſe ten years. I remain,

Your's, &c.

Cork, June 18, 1800. C. SUGRUE, M.D.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

ENCOURAGED by your reception of my firſt Eſſay in Surgery, permit me to addreſs you with a few thoughts thrown together on ſome caſes in that branch of ſcience, which have lately fallen under my care, chiefly relative to inflammation and abſceſs of the bladder. All the cavities of the body, as well as its other parts, are known to be liable to theſe affections, and have already been ably treated of by practical authors; ſtill, I think, from the following caſe which I am about to delineate, we muſt proceed a ſtep further, and aſcertain the time and circumſtances which will warrant us to interfere in it by Surgery, after the effects of medicine have been tried in vain.

Allen Green, aged 40, came on the Diſpenſary here in March laſt, labouring under a temporary ſtoppage of urine, which, when voided, depoſited purulent matter in conſiderable quantity; tongue, pulſe, and other ſymptoms indicating a febrile ſtate of the ſyſtem. He attributed his complaints to an imprudent uſe of injections for a gonorrhœa, which he had contracted ſome months before. The pain in the region of the bladder was conſtant, but aggravated on preſſure, or on the return of the inclination to make water, which was now become very

very frequent, and could not be effected without ſevere ſtraining, and even, at times, not without the aſſiſtance of the bougie or catheter. Upon the introduction of theſe, the ſtricture appeared to be entirely at the neck of the bladder, behind the proſtrate gland; but upon examination of that organ, no ſwelling or diſeaſe could be perceived. It was evident, in this ſtage of the diſeaſe, that the time was paſt to prevent or cure the complaint by bleedings or other antiphlogiſtic remedies, which, to be ſucceſsful, muſt be uſed early, and in due proportion.—All that could be done, therefore, was to procure a regular evacuation of the purulent matter along with the urine, and try the uſe of internal remedies. The uſual remedies were preſcribed, gentle diuretics, uva urſi, opiates, laxatives, tepid bath, mild diet, &c. with the uſe of the bougie. Theſe he could not endure to perſevere in; they rather ſeemed to do harm.

In employing theſe remedies, time paſſed away, and his general health was evidently far on the decline, while the local complaint continued unabated; from which circumſtances it was become apparent, the patient would fall the ſlow but certain victim of hectic diſeaſe; an event that had occurred to two or three other patients labouring under ſimilar ſymptoms, that had fallen within my obſervation in the courſe of practice; and I began to think, how far I was warranted to proceed by inciſion to cut acroſs the ſtricture. My idea was to perform the inciſion as if for the lateral operation, to preſerve the wound open, and waſh out the bladder with warm milk and water.—The patient was appriſed of his fate, and conſented to ſubmit to whatever might be deemed compatible with life. Before proceeding to ſuch an operation, I deemed it reaſonable to have the aſſiſtance of a conſultation; when, after peruſing the moſt approved ſurgery, examining the patient, and weighing his preſent ſituation, his legs being œdematous, and his ſtrength much impaired, it was judged improper to operate. The event was foreſeen, and the patient died.

Upon diſſection, the body exhibited the uſual emaciated ſtate. The great inteſtine was ſlightly inflamed all over the arch of the colon; two or three intus-ſuſceptions were met with. The bladder, upon being cut through, was found in a thickened ſtate, and full of fœtid and clotted pus. There was no ſtricture in the urethra till the very entering of the bladder; and it ſeemed to have ariſen there, in a great meaſure, from the exceſſive thickening of its coats. It was then that I regretted that I had not ſeized the opportunity earlier, and have conſidered the ſtricture as a ſufficient *warrant*, by a full and free inciſion either by the knife or gorget, to have laid open the bladder,

bladder, and thus have given Nature, with the aſſiſtance of art, a chance to have overcome the diſeaſe; and to lay it down in future, that whenever a ſtricture occurs, irremovable by bougies, accompanied with a purulent diſcharge, to proceed as we would do in other caſes of abſceſs,—to operate freely, and give full vent to the matter.

I was much confirmed in the above reaſoning, from obſerving the phænomena which occurred in a caſe of deep-ſeated femoral hernia, in a female patient, that fell to my ſhare in practice at the ſame time I was treating the above. When called to the patient with hernia, a poor woman reſiding in the country, the tumor had been down nine days; and from her own efforts to reduce it, was become exceedingly painful and indiſtinct. It was evident from the aggregate of the ſymptoms, as well as the length of time they had been preſent, that the ſtate of the tumor and fate of the patient were very critical. An extenſive inciſion was made acroſs the tumor through the outward ſkin; the ſac was cautiouſly ſcratched: but it was not till after cutting through a conſiderable depth of fat and glandular ſubſtance that a fluctuation was felt; at length an enormous quantity of fœtid pus burſt out. The bag was laid extenſively open, its different laminæ being quite indiſtinct; and after wiping the wound, the inteſtine was found deep in the bottom, in a gangrenous ſtate. The patient was put to reſt through the night, not without anxiety for her fate. In the morning ſhe was found conſiderably relieved, and the fever much abated. The ſtricture had been fairly divided, and the pus evacuated. Nature proceeded to do the reſt, to throw off the ſloughs both in the inteſtine and membranes, and to heal the wound, which is now nearly cloſed; which leads me to keep in view the practice, in regard to the firſt caſe mentioned in this Eſſay, and to extend the propoſition in Surgery, That whether the *ſtricture* ariſes from external wounds or diſeaſe, whether the cauſe of irritation is foreign or generated matter, it is our buſineſs, when neceſſity demands it, to cut through the one, in order that we may relieve the ſyſtem from the other. I remain,

GENTLEMEN,

Your moſt obedient,

Paiſley,
Aug. 30, 1800.

THOMAS RICHMOND.

On the Physiology of the Brain and Nerves.

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

IF you will do me the favour to admit into your valuable Journal the following Remarks on the Phyſiology of the Nerves, which have been drawn up with a diffidence commenſurate with the acknowledged difficulty attending this intereſting ſubject; and if it ſhould be the means of furniſhing any hint which, matured by ſome abler hand, may lead to a more clear and ſatisfactory inveſtigation of that wonderful part of the animal œconomy, I ſhall feel myſelf highly gratified.

Many Phyſiologiſts have endeavoured to diſcover, whether ſenſation and motion are produced by vibration along the courſe of the nerve, or by a fluid; their reſearches have generally proved unſatisfactory, for want of even a probable elucidation of the fact.

Although this is a part of the phyſiology of the animal œconomy, which may not admit of abſolute proof; ſtill, I think, there may be a few facts advanced, which might, in the courſe of time, be the means of rendering this intricate ſubject more clear. Thoſe facts which we do know, namely, that the nerves are the principal agents by which ſenſation and motion are produced, and that the cauſe which generally ſets them in action reſts in the brain, are ſo clear and demonſtrative, that there cannot be two opinions on the matter; as alſo that, if a nerve be divided, the part to which it is diſtributed is immediately deprived of the faculty of feeling and motion. It is the means by which this is brought about that ſtill lies in a labyrinth of myſtery, and probably ever will. But let the difficulty be ever ſo great, it ſhould not deter any one who has ſomething new to offer, from contributing his mite; as by the union and inveſtigation of ſeveral data, the truth may at laſt be diſcovered.—Upon this principle I take the liberty of ſubmitting the following obſervations.

Many eminent Phyſiologiſts have declared, that the opinion of the animal ſpirits being a fluid, and that this fluid is conveyed from the brain by the nerves to the different parts of the body for the purpoſe of giving ſenſation and action, muſt undoubtedly be ill founded, as a fluid has never yet been diſcovered in the nerves. So far it may be true, that the nerves do not convey any thing which is perceptible, or that poſſeſſes altogether

together the properties of a fluid; ſtill they may convey, as conductors, that ſubtle matter which has got the name of the electrical fluid.

Why may not this penetrating fluid, which pervades all bodies, be the primum mobile, or grand cauſe, which produces the wonderful phænomena in the nervous ſyſtem? Why may not the nerves be the ſole diſtributors of this matter, however produced, and muſcular action, if not ſenſation, depend entirely upon its influence?

That muſcular motion may be cauſed by the action of the electrical fluid, the experiments of Galvani and Valli, the properties of the torpedo and other electric fiſh, ſufficiently demonſtrate. It is worthy of remark, and much to our preſent purpoſe, that in thoſe fiſh which have the peculiar power at will of electrifying any ſubſtance within their reach, that their bodies are little elſe but a bundle of nerves, by far a greater proportion than any other animal whatever; and the nerves are likewiſe arranged in a line with the part which gives the ſtroke: a ſtrong evidence this in ſupport of the opinion now advanced; or why ſhould Nature make uſe of the ſubſtance called nerve, in preference to any other, as the beſt medium for collecting and diſcharging the electrical fluid?

The velocity with which impreſſions are communicated to and from the brain, cannot well be produced by any other known means, but by ſome *peculiar modification* of the ſame principle upon which the effects of electricity depend.

Another corroborating teſtimony of this opinion may be deduced from the effects that a certain ſtate of the atmoſphere produces on all, and particularly ſome, conſtitutions. From experiments which have been made, it appears that the circumambient air at thoſe times is unfavourable for electric inveſtigation, and evidently diminiſhes the effect, and perhaps the quantum, of this very ſubtle and active matter. Its preſence, then, is here proved to be highly neceſſary for the continuance of life, as the leaſt diminution in quantity cauſes ſuch conſiderable derangement in the animal functions.

If it could be once proved that a *principal* property of the brain was for the purpoſe of collecting, by the medium of the circulating fluids, the electric matter, and diſtributing the ſame by the nerves to all parts of the body, it might probably throw ſome light on the uſe of the ganglions. Theſe ſwellings differ from nerve in being more vaſcular, and likewiſe more pulpy, reſembling in their ſtructure the ſubſtance of the brain. It may not, therefore, be a very unreaſonable idea, to conſider them as ſo many little brains, aſſiſting the great maſs, by re-

taining and distributing this useful fluid as the body may require it.

I have often remarked that the ganglions are distributed in greater numbers, and also are in size much larger, in the course of the great sympathetic nerves, termed by Anatomists the par vagum and intercostal. As these are the most remarkable nerves in the body, whose branches are distributed very remote from the great brain, there might reasonably be wanted some other subordinate apparatus than merely nerve, not only to generate, but also to retain a sufficient quantity of this circulating fluid.

Dr. Monro's case of the child born without a head, certainly strengthens, and that in a very great degree, the before-mentioned opinion. It proves, that muscular action can even exist independent of a brain; and that the cause which produces nervous energy, must necessarily be derived from some other source.

The use of the nerves, under this idea, appears to be, *principally*, as so many quick conductors, conveying sensation and motion to every part of the body. The brain and ganglions may also be compared; the first, to a large reservoir for the electric fluid; and the latter, to so many knobs, answering similar intentions in the grand machine of Nature as those do which are used for experimental purposes in electricity.

I am fully aware that there may be some and even many objections advanced, in opposition to this opinion; but I flatter myself that they will not prove so conclusive and satisfactory as those which have been already opposed to the doctrine of vibrations.

Thus have I ventured to give my thoughts upon a subject of great importance; and however they may be received in other respects, I hope my claim for good intention will not be disallowed.

I am, your's, respectfully,

Alcester, Aug. 14, 1800. T. PURTON.

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

I Am induced, from the attention which you have already paid to my Communications, to offer a few Remarks on the Operation for the Hare-lip. I have often thought that this operation has been deferred too long after birth; and that if it was performed

formed earlier, the child would not only ſuffer leſs, but there would be leſs difficulty in the operation. The reſult has fully anſwered my expectations: I find many advantages in the early performance of the operation; the principal are, the paſſive ſtate of the little patient, and the thinneſs of the lips. The common ſuture I think preferable to the pins, which, with a proper bandage to keep up the cheeks, is all that is neceſſary. I operate as early as the third week; and on the fourth day from the operation, the ligatures may generally be removed: but reſpecting this, there muſt neceſſarily be variety in different caſes.

Theſe remarks may be conſidered by ſome as trifling; but if they tend in the leaſt to diminiſh the ſufferings of the child, and at the ſame time give leſs impediment to the operator, I think you will deem them worthy of notice.

I am, Gentlemen,

Your very humble ſervant,

Alcester, Sept. 12, 1800. T. PURTON.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

THE teſtimony of many reſpectable practitioners, and my own experience, having convinced me that the Cow-pock diſeaſe is leſs violent and leſs dangerous than the Small-pock in its mildeſt form; alſo that it is a ſure preventive of the Small-pock, if reſorted to previous to Small-pock infection; and if my opinion is correct reſpecting the period when Small-pock becomes infectious by the atmoſphere, I ſhall be able to prove that it will *prevent*, although the perſon may have received that infection two or three days. It is my preſent opinion that Small-pock becomes infectious many hours before the eruption is manifeſt on the ſkin. However this may really be, is not eaſily determined; and I know much diverſity of opinion exiſts on the ſubject. But the principal object of this letter is to offer for your inſertion ſome facts reſpecting the Cow-pock, which occurred in one family under my own obſervation, believing that ſome of the attending circumſtances were rather peculiar; and although the general opinion of the moſt diſcerning of the profeſſion, as well as of the public, now preponderates in favour of the new diſeaſe, yet as objections and prejudices are ſtill oppoſed to its progreſs, I truſt I ſhall not be ac-

cuſed

cuſed of ſupererogation if I endeavour to throw my mite into the ſcale.

Maſter Teſchemaker, 10 years of age, recently arrived from the Weſt Indies, was attacked with fever on the 2d of July laſt; on the 4th, a variolous eruption appeared on the ſkin, with every appearance of a violent diſeaſe taking place. There were at this time four other perſons in the houſe, relatives and attendants, who had not had the diſeaſe. I adviſed that they ſhould immediately be inoculated with Cow-pock matter. They had not heard of the new diſeaſe, and of courſe did not at once adopt what I recommended; however, on the 6th, two of them, Mr. and Mrs. Krebs, adopted what I adviſed; and on the 7th, one other, a Negro woman. The fourth ſaid he had Small-pock in the Weſt Indies. On the 9th, Mr. K's arm manifeſted the impreſſion of the diſeaſe; on the 12th, I found the pulſe accelerated about 10, and his tongue a little affected. Theſe ſymptoms continued about three days; the arm ſoon after ſcaled, and he became perfectly well. Mrs. K's arm did not ſhow the ſame marks of diſeaſe until the 11th. On the 15th, it became very much inflamed, and fever occurred in about the ſame degree as in Mr. K. but ſhe had much more head-ach, which I attributed in ſome degree to extreme anxiety and watchfulneſs, ſhe having from Maſter Teſchemaker's firſt attack attended him day and night unremittingly, and he was now in great danger. On the 16th, a puſtule appeared on her leg, but the peculiar form and character I cannot deſcribe, it having been broken very early by ſome external violence; I imagine by rubbing or ſtriking the other leg againſt it.

This puſtule on the leg ſeems to confirm Dr. Woodville's opinion, that ſuch may be produced by perſons inſpiring a variolated atmoſphere while under the other diſeaſe. The inoculated part as well as the puſtule continued inflamed for about ten days, and this lady became well.

I was in doubt for ſeveral days, whether the one inoculated laſt (namely, a day after this lady and gentleman) had received the infection; but on the 17th, ten days after the inoculation, (ſhe continuing to breathe an atmoſphere highly variolated) ſome inflammation took place on the arm, and at the ſame time a conſiderable degree of fever; but there were many reaſons to induce me to think this fever was the effect of cold, and nightly attendance on the miſerable ſufferer with Small pock. From this ſhe gradually amended for ſome days; but on the 26th, nine days after the firſt attack of fever, and nineteen after the Vaccine Inoculation, and after three days of renewed attack of fever, accompanied with violent head-ach and back-ach, a variolous and very numerous eruption appeared: The fever now abated,

abated, and the inoculated arm ſtill retained the appearance of local infection. It was now determined to ſend her to the Small-pock Hoſpital, where ſhe recovered.

Maſter T——, the firſt ſubject mentioned with Small-pock died on the 27th. On the 31ſt, Maſter Swain, about 10 years of age, another of the four, (who ſaid he had had the diſeaſe) began to ſicken, and had a very violent and dangerous diſeaſe, but from which he is now recovered. Another young gentleman who had his paſſage in the ſame veſſel, and who, moſt probably, caught his diſeaſe from the ſame ſource as my firſt, alſo died of Small-pock, within a few days of him; but this laſt was not under my own obſervation, having taken lodgings at a different part of the town.

Now, Sirs, I muſt take the liberty here to endeavour to impreſs on the Readers of your valuable Journal, (by a ſort of recapitulation) the great utility of the new diſeaſe, for which the national gratitude ought, in ſome way or other, to be preſented to Dr. JENNER. Here were ſix perſons, all of them juſt arrived from the Weſt Indies, two of whom died of Small-pock, two others recovered only by a very ſevere ſtruggle and laſting deformity of the ſkin; while the two who were inoculated (in time) with the Vaccine matter, eſcaped by the means of a very ſlight diſeaſe, although they were for three days previous to their inoculation, and for ſome weeks after, in the houſe and in the chamber with thoſe who had Small-pock violently.

That the Negro woman was inoculated with Cow-pock matter, and yet had Small-pock, is not to be imputed to any want of power in that to prevent, but from its having been deferred too long; and at the time of inoculation I expreſſed my doubt of its ſucceſs.

If you think this detail worthy a place in your next Number, I ſhall hope it will furniſh ſome additional proof of the utility of the new Inoculation; and alſo, that ſome of your Readers, of more experience and more diſcernment than myſelf, may make ſome deductions from theſe facts, to the further elucidation of this moſt important diſcovery. I am,

GENTLEMEN,

Your's, moſt reſpectfully,

L. LEESE.

Throgmorton Street, Sept. 12, 1800.

To

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IF the information of an individual practitioner, far removed from the metropolis, can add any thing to the very high medical authority with which you have favoured the public on the ſubject of the Vaccine Inoculation, my teſtimony is very much at your ſervice; it may, in ſome meaſure, ſerve to aſcertain the progreſs of that very uſeful diſcovery all over this iſland.

In the month of July laſt, during our warmeſt weather, the confluent Small-pox appeared in the neighbourhood of ſome of the firſt families in this part of the country, who became very much alarmed for the ſafety of their children. I was conſulted, and on due enquiry found moſt of the children under very unfavourable circumſtances to receive the variolous infection; I mentioned my objections to the parents, and at the ſame time propoſed the Vaccine Inoculation, under the complete impreſſion it would be equally ſucceſsful in reſiſting contagion. My propoſal was readily agreed to; Vaccine matter was immediately procured; the children were inoculated, and took the infection in the moſt diſtinct and favourable manner; the fears of the parents were completely removed; and from this ſucceſs, and the example of the firſt families, I am happy to inform you, that the Vaccine Inoculation is becoming general in this diſtrict of country. I am,

GENTLEMEN,
Your obedient humble ſervant,
A. WILLSON, M. D.

Montroſe, North Britain, Sept. 10, 1800.

A Concise History of the Principal Discoveries in Anatomy.

[Concluded from No. XIV. pp. 356—362.]

§. 41. The *glossopharyngeus*, or our *ninth* pair, was generally conſidered in the ſixteenth century, as a branch of what was at that time called *the ſixth pair*, or our *eighth*, or *nervus vocalis*. FALLOPIUS was the firſt who diſtinguiſhed this nerve from the proper *nerve* of the voice, by evidently ſhowing its diſtribution to the tongue and fauces.* EUSTACHIUS aſſigned to his

* Obſervat. p. 406.

his ſixth pair three principal branches, viz. the *glossopharyngeus*, the *vocalis*, and the *accessorius Willisii*,* of which the *gloſſopharyngeus* was firſt figured by him.† Although VESALIUS knew the *nervus vocalis*, and its combination with the *lingualis medius*, or his ſeventh pair, and likewiſe *the recurrent branch*, he did not accurately enough purſue its courſe, fancying that it provided the bladder and uterus with nerves.‡ FALLOPIUS, however, evidently demonſtrated that beyond the liver and meſentery no inteſtine received any branch from the *nervus vocalis*.§ EUSTACHIUS likewiſe rightly figures the diſtribution of this nerve, and its final tranſition into the *intercostal nerve*,‖ but COLUMBUS¶ and GUIDI,** ſtill maintained the erroneous opinion of VESALIUS. The *nervus accessorius Willisii* was better known to the anatomiſts of the ſixteenth century than the *glossopharyngeus*, though it was taken for a branch of the *nervus vocalis*. VESALIUS deſcribes it as a branch of the ſixth pair, diſtributing itſelf to the muſcles of the fore and back neck;†† and likewiſe FALLOPIUS‡‡ and GUIDI.§§ EUSTACHIUS, however, has repreſented in his tab. , the origin of this nerve from the third cervical nerve, its combination with the *eighth pair*, or *nervus vocalis*, and its progreſs to the *cleidomastoideus* and *cucullaris*, together with its communication with the third and fourth cervical nerve;‖‖ and KOYTER had even traced the roots of the acceſſory nerve to the fifth cervical nerve.¶¶

Our *twelfth pair*, *(the nerve of the tongue*, *lingualis medius*, *hypoglossus,)* was the ſeventh pair of the ancient anatomiſts. VESALIUS deſcribes indeed its origin from the corpora pyramidalia, its combination with the *nervus vocalis*, and diſtribution in the tongue; but in this deſcription he is very imperfect, committing at the ſame time the error of diſtributing this nerve to the *stylohyoideus*,*** which is not the caſe, as it only paſſes between the *hypoglossus*, to which it ſometimes imparts a ſmall branch, and the *stylohyoideus*.††† ETIENNE is acquainted with its communication with the firſt and ſecond cervical nerve,‡‡‡ and FALLOPIUS with its anaſtomoſes in the

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* Oſſ Exam. p. 205.
† Tab. xviii. fig. 2, *(mm)*
‡ Lib. vii. c. 9, p. 369.
§ Obs. p. 407
‖ Tab. xviii. fig. 2, (MV)
¶ L. viii. p. 364.
** Lib. iii. p. 82.
†† Lib. vii. c. 9, p. 369.
‡‡ Obſ. p. 407.
§§ Lib. iii. p. 82.
‖‖ *Euſtache*, Tab. xviii. f. 1, 2, (ξηδι); fig. 2, (*e f g h i k*); Tab. xix. fig. 2, *(f g.)*; Tab. xx. fig. 2, *(a b c)*.
¶¶ *Koyter* Obſervat. p. 108.
*** *Veſal.* Lib. vii. c. 10, p. 372.
††† *Boehmer* de nono pare nervor. cerebr. § 43.
‡‡‡ *Stephan.* p. 249.

tongue, with the gustatory nerve of the third branch of the fifth pair.* Du Laurens refutes the opinion of those who adopt a combination between this and the *acoustic nerve*, for explaining the co-existency of deafness and dumbness.† Eustachius has given the first good representation of its origin and progress.‡

§ 42. As for the *spinal nerves*, *thirty pair* of them were generally counted, viz. seven or eight *cervical nerves*, twelve nerves of the back, five of the loins, and six of the os sacrum, or the false vertebræ. The old authors differ very much in the number of the cervical nerves, as some do not know the first cervical nerve, and, consequently, have but seven pair; and others, who know it, think the seventh pair the last, calling our eighth, which comes out between the seventh vertebræ of the neck and the first of the back, the first back nerve of the bone. Berengar, however, differs from them by allowing eight cervical nerves, like the present anatomists.§ Zerbi had already found the true origin of the first cervical nerve,‖ and Vesalius describes afterwards, with much accuracy, the bony canal or furrow in the *atlas*, through which it passes, distributing itself into the muscles of the neck;¶ but he supposed that there were only *seven* cervical nerves, likewise taking the nerve, which issues between the seventh vertebra of the neck and the first of the back, for the first pair of the nerves of the back.** Etienne is entirely ignorant of our first cervical nerve, considering our second pair as the first.†† Ingrassias describes, much better than Vesalius, the origin and progress of the cervical nerves, particularly their ganglia and distribution into the fore and back branches. He thinks that the seventh pair combines itself sometimes with the fourth, fifth, and sixth cervical nerve.‡‡ Columbus too delineates with correctness the origin and progress of the first cervical nerve, and reproves Vesalius for having adopted twelve pair of the back, there being only eleven. It is probable that Columbus considers the last nerve of the back as the first of the loins.§§ Eustachius has a particular claim to be praised, for having first explained, by figures, the origin of the cervical nerves, and their communication with the *intercostal nerve*.‖‖

Koyter

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* *Fallop.* Obs. p. 407.
† *Laurent.* Hist. Anat. lib. xi. c. 11. p. 965.
‡ Tab. xviii. fig. 2. (10, 11, 12.)
§ Comment. in Mundin. f. 488. a.
‖ Anatom. p. 127.
¶ Lib. iv. c. 12. p. 379.
** Ibid. c. 13. p. 381.
†† *Stephan.* p. 73.
‡‡ Comment. in *Galen* de Ossibus, p. 169, 171.
§§ Lib. viii. c. 4. p. 371. c. vi. p. 380.
‖‖ Tab. xviii. fig. 1, 3, 4, 5, (λ). Tab. xvii. fig. 2, (m).

KOYTER and others that deſcribe theſe nerves, have moſtly only quoted EUSTACHIUS.*

I have above mentioned, that the *intercoſtal nerve* was conſidered by many phyſicians of this century, as a continuation of the *nervus vagus*, or *vocalis*. ACHILLINI particularly,† VESALIUS‡ and FALLOPIUS§ conſidered the *intercoſtal nerve* as a branch of what was then the ſixth pair, and the Tables of EUSTACHIUS evidently ſhow his having been of the ſame opinion.‖ ZERBI, however,¶ and after him BERENGAR** and MASSA,†† maintained, that this nerve was a continuation of the preſent fifth pair, becauſe they knew its combination with the *nervus vidianus*. ETIENNE was almoſt the only anatomiſt who took the *intercoſtal nerve* for a peculiar and ſeparate trunk.‡‡

§ 43. So far they were advanced at the beginning of the ſeventeenth century in the knowledge of the human body. It muſt be allowed, that a great deal is owing to the induſtry of the anatomiſts of thoſe times, and, particularly, to the immortal FALLOPIUS. However, the greateſt diſcovery that could take place in anatomy, the circulation of the blood, was not yet made. Of this, its cauſes and conſequences, we intend to lay before our readers at another time.

Observations on a Case of Small-pox having supervened after the Vaccine Inoculation; *by* Dr. HUGGAN.

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

WE find, in the 17th Number of the London Medical Review and Magazine, p. 105, a Caſe inſerted "of Small-pox having ſupervened after the Vaccine Inoculation," which the Author tells us, has "been the ſubject of much converſation," and "ſome miſrepreſentation;" and leſt any perſon ſhould doubt this ſtatement, in the ſubſequent number, to wit, the

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* *Coiter*, Obſ. p. 108.
‡ L. iv. c. 9. p. 371.
‖ Tab. xviii. fig. 2. (ξξ).
** Comment. in Mund. f. 456. b.
‡‡ *Stephan.* p. 69, 76.
† Annotat. in Mundin. p. 30.
§ Obſerv. p. 407.
¶ Anat. p. 40.
†† Introduct. f. 89. a.

laſt, p. 208, we find a ſecond letter on the ſame caſe, wherein the Author aſſures us, "that there can no longer remain a doubt upon that ſubject; for," ſays he, "I have inoculated with the matter, and produced Small-pox in the moſt ſatisfactory way."

That this Caſe ſhould have occaſioned "much converſation" amongſt thoſe who were *weak* enough to believe ſuch an occurrence *probable*, or even *possible*, can eaſily be ſuppoſed; and that it has alſo been the ſubject of "ſome" (nay much) "misrepreſentation," few will doubt, who have conſidered the caſe as related by the Author himſelf, and which we ſhall now examine more particularly. With regard to the diſeaſe that immediately followed the Vaccine Inoculation, "On the third day," we are told, that "there were ſufficient marks of the action of the virus;" and that "on the eighth day, the child complained of head-ach and *ſickness*, had a quick pulſe, *white tongue*, and increaſed heat, with an *enlargement* and tenderneſs of the axillæ."

If I may be allowed to give an opinion from my own experience, from that of my friends which I have ſeen, and from all that I have read upon the ſubject of the Cow-pox, I will venture to affirm, that the Vaccine Inoculation, in ſo young a child, has never produced a train of ſymptoms either ſo violent, or that have followed each other in a ſimilar ſucceſſion, to what we are told took place in this Caſe. No other practitioner, I believe, has ever been able to ſay that there were, on the *third* day, *ſufficient marks* of the action of the virus. Allowing, however, this to be ſometimes the caſe, we ſhould have expected, in a ſubject ſo irritable as this child appears to have been, eſpecially from the regular manner, in point of time, with which the ſymptoms of the Cow-pox from inoculation are obſerved to follow each other, the conſtitutional diſeaſe to have come on, at fartheſt, three days afterwards, that is, on the ſixth day from the *ſupposed* inoculation with *vaccine* matter; for, I believe, it has been uniformly remarked, that if, on the fifth day after this inoculation, we can, from unequivocal and "ſufficient marks of the action of the virus," pronounce infection to have taken place, the conſtitutional diſeaſe commences upon the eighth. Nor do I ever recollect to have ſeen or heard of the Cow-pox, in infants, being accompanied with *ſickness*, *white tongue*, nor even much increaſed heat; nor have I ever perceived any *enlargement* in the axilla, though always a tenderneſs, eſpecially when touched.

To be more circumſtantial is unneceſſary, as the Caſe ſpeaks for itſelf; every medical man, much converſant in diſeaſe, muſt have occaſionally obſerved a ſimilar train of ſymptoms to have followed a cut puncture from a foul lancet or other pointed inſtrument,

ſtrument, independent of the matter that made it ſo; and there is not a doubt but that this child's *firſt* diſeaſe was imputable to ſuch a cauſe.

With the above Caſe, the Editors of the Magazine in which it appeared, have very properly contraſted a copy of the Teſtimonial, in favour of the Vaccine Inoculation, that has been ſigned by ſo many reſpectable Practitioners in London, and to which, any further individual teſtimony in its favour is *now* quite unneceſſary; and with regard to the purport of the Author's ſecond letter, they have obſerved, that it "does not leſſen the importance of the Vaccine Inoculation,—ſince it ſtill remains a certain preventive of the Small-pox."

It has alſo been elſewhere very juſtly obſerved, (Medical and Chirurgical Review, laſt Number, p. 190) that the "Hiſtory" of this Caſe "is defective, in not deſcribing more minutely the appearances of the inoculated part in its different ſtages." This is certainly a very important point, as on the appearances of it, when other ſymptoms are not perceptible, we are obliged to form our indication, whether or not the whole ſyſtem has been affected.

It is, certainly, now too late of the day for Practitioners to be amuſing themſelves with publiſhing Caſes altogether inconcluſive of what they ſeem deſirous to be inferred from them, or in hopes of being able to controvert the *efficacy* of the Cow-pox, in preſerving the human conſtitution from the infection of the Small-pox. Such caſes, indeed, may impoſe upon the credulous, may perplex the minds of thoſe who ſtill have their doubts on the ſubject, and may afford a malicious and ſhort-lived triumph to the ungenerous part of the Profeſſion, and thoſe who think themſelves intereſted in oppoſing the Vaccine Inoculation; but they never can influence the liberal and enlightened mind, that grounds its concluſions upon the ſteady and uniform reſult of extenſive and deciſive experience.

Magna eſt veritas, et prevalebit.

——————— 'Tis evidence ſo full—
If the laſt trumpet ſounded in my ear,
Undaunted I ſhould meet the Saints half way,
And, in the face of Heav'n, maintain the fact.

DRYDEN.

Now, leſt your ſilence on the Caſe alluded to ſhould be conſtrued in a light different from that in which you have conſidered it, I have taken the liberty of troubling you with theſe few Remarks; which, if you think the formal refutation of ſuch a Caſe at all neceſſary, I will thank you to inſert in the enſuing Number of your Journal. I have to regret that I had it

it not in my power to have ſent them ſooner, as from unforeſeen delay I did not receive your laſt Number till yeſterday.

I am, Gentlemen,

Your moſt obedient ſervant,

Tenterden, Kent,
Sept. 17, 1800.

A. HUGGAN.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

SEVERAL inſtances of Fractures of the Skull doing well without the uſe of the trephine, having been publiſhed by Mr. O'Halloran, Mr. Abernethy, and other men of character in their profeſſion, I truſt every additional fact on the ſubject may prove uſeful to the young and inexperienced practitioner; therefore, I take the liberty of communicating the following Caſe that lately came under my care, which, if you think worthy of a place in your valuable Journal, is much at your ſervice. I am,

GENTLEMEN,

Your obedient humble ſervant,

Ketley, Shropſhire,
Sept. 15, 1800.

J. EVANS.

On the 21ſt of December laſt, Thomas Haywood, a boy, 9 years of age, being at work in a coal mine in this neighbourhood, a large quantity of coal fell upon his ſhoulders when he was in a ſtooping poſture, by which he was driven with conſiderable force upon his head, againſt an iron rail that formed one ſide of a way for the conveyance of ſmall carriages from the remote parts of the pit to the bottom of the ſhaft. In conſequence of this accident, an extenſive portion of the ſcalp was detached from the occipital bone; and about an inch above the orbit of the right eye, there was a large wound of the integuments, accompanied with a fracture of the frontal bone, *three* inches in *length*, with a depreſſion of the lower portion of it, *three-eights* of an inch below its original level.* The ſuperior edge of the fracture was very rough, a looſe fragment of which I removed with my thumb and finger. The boy vomited,

* The depth of the depreſſion was meaſured on the tenth day after the accident, at the time the plaſters were removed, when it appeared much leſs than at firſt.

mited, and talked a little incoherently while I was dreſſing him, but ſoon recovered, ſo as to give rational anſwers to ſuch queſtions as were put to him. As he had no alarming ſymptom of compreſſed brain, I did not think myſelf juſtifiable in making uſe of the trephine; therefore, brought the retracted edges of the wound together with ſutures, and applied ſlips of adheſive plaſter over the whole, with an intention of retaining the parts more firmly in contact. The detached portion of ſcalp on the poſterior part of the head (after being freed from a conſiderable quantity of coal ſtack, which had been forced under it) was replaced, and ſecured in its ſituation with ſticking plaſter, and a bandage lightly applied. After his wounds were dreſſed, he was well enough to be conveyed home, a diſtance of half a mile from my houſe, where he had been brought immediately after the accident. A doſe of Dover's powder was given him that night, which had a good effect; but the next morning he complained of much pain in the injured parts. The ſcalp being tumefied, I directed the bandage to be conſtantly moiſtened with a ſolution of crude ſal ammoniac in vinegar; by this mode of treatment the pain and ſwelling ſoon abated.

The plaſters were not removed from the forehead for the ſpace of ten days, at which time they became looſe in conſequence of a ſmall diſcharge of matter; the wound appeared then in a healthy granulating ſtate; that on the occiput healed principally by the firſt intention. It is worthy of remark, that the boy was not confined to his bed a ſingle day, nor did one unfavourable ſymptom occur. Opiates and cathartics were occaſionally adminiſtered; and in the ſpace of five weeks he was perfectly well without any exfoliation, notwithſtanding a conſiderable part of the os frontis was denuded both above and below the fracture.

Chemical Experiments and Observations, on the Extraction of Sugar and Syrup from Indigenous Plants. By Sigism. Henry Hermbstaedt.

[Concluded from our laſt, pp. 246—252.]

11. *Experiments with Carrots, (Daucus Carotta, L.)*

BY cutting carrots into pieces, and boiling them with water, a ſweet liquor is got, of which, by evaporation, country people prepare a juice, which they call carrot-ſyrup, and eat

eat either with bread, or uſe it inſtead of ſugar, and by which common ſyrup is ſometimes adulterated. But as the juice obtained in this way is ſtill too mucilaginous to be uſed as a ſyrup, I operated in the following manner: A buſhel of carrots being freed from their rind, were ground upon a grater, and the juice expreſſed. It was then boiled, clarified with the white of eggs, and afterwards thickened to the conſiſtency of a ſyrup; and of this, ſix pounds and a half were obtained, which though of a pretty agreeable taſte, was by far inferior to that of both beets. It was impoſſible to draw any ſaccharine cryſtals from it, and the alkohol did but extract a ſubſtance very much like manna.

12. *Experiments with Common White Turnips, (Braſica Rapa.)*

Twelve turnips were ground upon a grater, being freed from the outer rind, and gave by expreſſion a ſweetiſh juice. This being clarified, and ſtrained through a woollen cloth, was thickened to a ſyrup of an agreeable taſte, and though inferior to that of the beets, it is equal to common ſyrup. By another experiment, I found that from one hundred and ſixteen pounds of turnips, eight pounds of ſyrup may be obtained, in which, after ſome months, cryſtals of brown ſugar had formed; but they ſeparate with difficulty from the remaining parts.

13. *Experiments with the Cole Rape, (Braſſica Napobraſſica.)*

The ſucculency of this turnip, and the ſweetneſs of its juice, induced me to undertake the ſame experiments with it; ſixty roots were therefore ground and expreſſed, and gave twenty-two quarts of ſweetiſh juice, which, however, taſted a little acrid. By ſeething it, a great deal of its impurities ſeparated, and the fluid became quite clear. Being filtered, it was mixed with twenty quarts of lime-water and gently boiled, by which the acrid taſte went off, and a ſyrup was got, that had, in every reſpect, a great likeneſs with that of the black birch, and may be uſed inſtead of common ſyrup. To obtain ſugar from it, a portion was evaporated in a glaſs veſſel; and after ſome weeks, ſmall cryſtals of it were formed, whoſe quantity I could not determine.

14. *Experiments with the Skirret, (Sium Siſarum, L.)*

Mr. Marggraff obtained from a pound of freſh ſkirret roots four ounces and a half of dried; and half a pound of dried roots gave three drachms of a pure ſugar. My experiments were only made for the purpoſe of obtaining a ſyrup from it, as the extraction of ſugar is ſubject to many difficulties, on account

count of their containing too great a quantity of farinaceous matter. A bushel of these roots, which weighed about twenty-six pounds, was pounded in a mortar, and afterwards repeatedly expressed, with the addition of some cold water, by which means a turbid sweet juice was obtained By exposing it in a cool place a quantity of farinaceous matter separated, and the liquor became clear. Being clarified with the white of eggs, and thickened, five pounds of a very agreeable syrup of a light brown colour were got; but it would prove too expensive for common use.

15. *Experiments with Parsnips, (Pastinaca Sativa, L.)*

The sweetness of these roots induced me to undertake a similar operation with them, though Marggraff had remarked, that but little sugar is to be obtained from them. A bushel of them, weighing twenty-four pounds, was accordingly treated in the same way as the former, and five pounds and a half of an agreeable syrup were extracted, which however had not quite lost the specific taste of parsnips.

These are the only experiments my time has hitherto allowed me to undertake; I have not yet been able to determine the relative proportion of sugar that may be obtained from each of those vegetables, but I shall endeavour to make some experiments by which this may be ascertained.

CRITICAL RETROSPECT
OF
MEDICAL AND PHYSICAL LITERATURE.
[FOREIGN AND DOMESTIC.]

A Treatiſe on the Chemical Hiſtory and Medical Powers of ſome of the moſt celebrated Mineral Waters; with Practical Remarks on the Aqueous Regimen; to which are added, Obſervations on the Uſe of Cold and Warm Bathing. By WILLIAM SAUNDERS, M. D. F. R. S. 8vo. pp. 483, price 8s. in boards. London, 1800, W. Phillips.

IN his Preface, Dr. S. gives the following account of his plan:—

"Impreſſed with the opinion that chemical analyſis, in its preſent improved ſtate, is fully adequate to make us acquainted with all thoſe foreign contents that give their medical powers to mineral ſprings, I have been more minute on this ſubject than perhaps might be thought neceſſary by the greater number of readers; but as it appears to me probable, that under particular circumſtances of dilution and temperature, the actual quantity of foreign matter contained in any water, produces effects by no means proportionate to thoſe that might occur under different circumſtances, I have thought it ſafeſt on the whole, to admit a conſiderable degree of accuracy on the ſubject of chemical analyſis, where the authorities were ſuch as to allow of it, in order that on this head at leaſt, there ſhould be as little error as poſſible; and I have not ſcrupled occaſionally to introduce remarks which will only be intelligible to the chemical reader. The terms of the modern chemical nomenclature have likewiſe been moſtly adhered to, as well as its principles, as they are ſuch as are now the moſt familiar to thoſe who are converſant in this ſcience. With regard to the individual mineral ſprings which are particularly treated of, they are very few compared to the vaſt number which, by acquiring a certain degree of local reputation, have gained a place in the catalogue of medicated waters; and I have only noticed thoſe that enjoy a high degree of celebrity, that are intereſting from ſome peculiarity of compoſition, or that ſerve to diſtinguiſh certain claſſes of theſe natural bodies, and illuſtrate their medical virtues. The reader will ſee, that the particulars concerning the chemical analyſis of theſe ſprings are extracted from the various detached publications on the individual waters; and ſome pains have been taken to reconcile or account for differences of reſult, which ſometimes happen where more than one authority has been conſulted. Theſe publications likewiſe generally contain remarks on the medical properties of the mineral water, and directions for its uſe, many of

of which, being written by excellent practitioners as well as ingenious chemists, who have long resided on the spot, afford much matter that is highly valuable to the physician who prescribes these remedies, and to the patient who uses them. This part of the subject has been selected with care, and is presented to the reader accompanied with such observations as appeared to me to be requisite.

"Any general account of the medicinal use of mineral springs would be imperfect, without taking some notice of the employment of them as a bath, either generally or topically; and as the single circumstance of temperature forms the basis of the most important distinctions on this subject, I have in the latter end of this work, taken into consideration the use of the warm and cold bath, in various diseases.

"The physician is frequently called upon to decide for his patient which of the various medicated waters he shall use; whether sea-bathing or a natural chalybeate, be the most eligible tonic; whether a gouty dyspeptic habit will be better put in order by the thermal waters of Bath or Buxton, the tonic purgative water of Cheltenham, or by the sulphureous springs of Harrogate. Without entering minutely into the circumstances of different cases, I have endeavoured to lay down such general indications, and to notice such distinctions, as will assist the practitioner, or even the invalid, who is in some degree acquainted with these subjects, to make his choice upon solid and judicious grounds; and on this head I have often been able to add to theoretical reasoning, the result of my own experience for many years.

"Such is the plan of the book which is here submitted to the candour of the public; and it appears to me, that the present time is that, in which a work of this kind may prove of considerable service, by collecting under one point of view, the leading features of those important improvements which chemistry has been making for many years upon these subjects, particularly with regard to their application to medicine."

The book is divided into seven chapters. In the first Dr. S. examines the chemical constitution of simple water, and shews that it is a component part of blood, and of all the animal and vegetable fluids and solids.

The second chapter is on the foreign contents of mineral waters, and the chemical tests by which they are distinguished. These impregnations are common air, carbonic acid, hydrogen, sulphurated hydrogen, and azotic gases; calcareous, magnesian, and aluminous salts; soda and ammonia; alkaline neutral salts; iron and copper; bitumen; siliceous and aluminous earth; and alluvial matters.

The author then examines the waters in common use, and recommends the following methods of correcting certain defects in them:

"Both chemical and mechanical means have been used with this intention; but it is very seldom that the former can be employed

in an adequate degree, without altering the taſte; and thereby rendering the water unfit for drinking, though it may be uſeful for other purpoſes. All the earthy ſalts which would oppoſe the ſolution of ſoap, may be decompoſed by a mild alkali, which will cauſe the earth to precipitate, and the addition of ſo much alkali, and the converſion of an earthy into a neutral alkaline ſalt, will not injure the ſolvent powers of the water.* Simple boiling will likewiſe ſoften thoſe waters whoſe hardneſs conſiſts in mere carbonated earths, eſpecially the calcareous. As this expels the carbonic acid, the earth ſubſides. This however will not remove ſelenite; and as moſt hard waters contain both theſe calcareous ſalts, boiling is only partially uſeful. Another and more extenſively applicable method is that of filtration. The principle of this proceſs is, to cauſe water that is foul to paſs through the very minute pores of any ſubſtance not of itſelf capable of imparting any thing to the water; and by this means every thing which is ſimply ſuſpended in the liquor, but ſo intimately diffuſed as not to be ſeparable by mere repoſe, is detained in the filter, and the water paſſes through clear and limpid. This is a proceſs which is performed largely within the earth, and hence we find the pureſt waters to ariſe through clear ſand or ſiliceous rock. To imitate this natural proceſs, nothing is better than the porous free-ſtone of which filtering ſtones are uſually made. Sand, clear gravel, pounded glaſs, and ſimilar ſubſtances, are equally fitted for this purpoſe. Filtration may be performed either by cauſing the water to deſcend by its own weight through a porous ſubſtance, or to aſcend through it by capillary attraction. The latter method, where it can be adopted, appears preferable. It is to be obſerved, however, that common filtration will not render water leſs ſaline, or ſeparate any thing that is truly diſſolved, but only what is ſuſpended. I have ſaid *common* filtration, for it has been ſuppoſed by ſome that ſea water, when paſſing up through a conſiderable ſtratum of ſand, may be deprived of its ſalt, as well as the impurities which viſibly foul it. It is certain that in many places remarkably good freſh water is found by digging a few feet in the ſand on the ſea ſhore, at a very ſhort diſtance from the high-water mark. This is the caſe at Yarmouth, on the Norfolk coaſt, and the water procured from theſe wells is purer than any other that is found about the town; but there is no direct evidence that this is ſea-water filtered by aſcent through the ſand, ſince it may be well ſuppoſed to be freſh water riſing from a greater diſtance within land, that has undergone the laſt degree of purification, by its paſſage through the fine clear ſand of which the ſoil is compoſed, for a conſiderable diſtance off the ſea ſhore.

"Again, there are numberleſs inſtances where ſprings of freſh water of great purity, unqueſtionably ariſing from the country higher up,

* The aſhes of fern or wormwood, which contain a good deal of carbonat of potaſh, are often uſed in various parts of the country for ſoftening hard water for the purpoſe of waſhing.

up, are ſeen cloſe to the ſea ſhore. Thus at Scarborough the haven is always left dry at low water, and at that time a number of freſh water ſprings are detected pouring their contents on the beach which is left bare by the tide. However the poſſibility of ſweetening ſalt water by mere filtration be determined, there is no method that we are yet acquainted with of performing this with ſufficient eaſe and expedition, to be employed for ordinary purpoſes. A turbid brine, by paſſing through a tub of clean ſand, will run through perfectly clear, but quite as ſalt as before. It appears, however, that an earth ſuſpended by carbonic acid, as for example, the carbonat of lime, will in a conſiderable degree be ſeparated in the filter, owing to the very divided ſurface of the water, by which much of this acid will be diſſipated; and thus a hard water will ſometimes be rendered ſofter as well as clearer by filtration."

The ſucceeding chapter, which is by far the longeſt in the book, gives a particular account of the waters of

Malvern	Bath	Tunbridge	Vichy	Aix
Holywell	Sedlitz	Spa	Carlſbad	Boſſet
Briſtol	Epſom	Pyrmont	Hartfell	Barege.
Matlock	Sea	Cheltenham	Harrogate	
Buxton	Seltzer	Scarborough	Moffat	

Together with a Synoptical Table of the compoſition of thoſe waters.

The two next chapters treat of the *internal* uſe of water, both as an article of diet and medicine.

The ſixth chapter contains deſcriptions of, and directions for, the *external* uſe of water, or the different kinds of bathing.

From the concluding chapter we preſent our readers with the following extracts:

" In peruſing the moſt popular treatiſes on particular mineral waters, eſpecially on thoſe of high and juſtly acquired reputation, written by practitioners long reſident on the ſpot, we ſhall find in many of them a great fund of accurate chemical knowledge, and excellent medical obſervations; but we ſhall alſo, in the greater number of theſe works, meet with certain modes of treating the ſubject, which may fairly be brought under candid criticiſm. Some of theſe writers (eſpecially thoſe who have ſhewn themſelves ſkilful and zealous chemiſts) have, I think, ſometimes refined too much on the ſcience, and have endeavoured to transfer the ſame accuracy of diſcrimination which experimental chemiſtry affords, to the explanation of minute effects produced on the living body by various ſubjects during their ſtay in its complicated organs. Others again, have endeavoured to throw a veil of myſtery over the whole ſubject, and, profeſſing to diſregard all the information which chemiſtry affords, they have ſtudiouſly avoided any attempt to explain the effects produced by certain mineral waters from a review of their contents, and have ſtrongly favoured the idea of their being *ſpecifics*, prepared by the hand of nature, againſt ſome of the moſt formidable and obſtinate diſeaſes with which the human race is afflicted.

" It

" It is urged by some of the merely practical writers on particular mineral waters, that the mode in which their active contents operate, is equally mysterious with that of some of our most powerful medicines, such as mercury and opium, and probably likely always to remain so; and therefore that accurate chemical examination is little else than philosophical trifling. But it should be remembered, that every medicated water is a compound, at least, of the water itself, and of that which gives it its sensible properties, and these it is the peculiar object of chemistry to separate, and to estimate their respective proportions. Now, no practitioner will deny that it is of consequence to know the proportional quantity of each ingredient in a compound form of medicine, that he may at least endeavour to ascribe to each its particular operation, although he does not pretend to explain how that operation is to be brought about.

" The composition of the most celebrated mineral waters having been known by accurate analysis, several ingenious men have endeavoured to confirm their experiments by synthesis; and to produce, by artificial means, a compound, in all respects similar to the natural preparation. To this too was added the additional motive of being able to supply the want of the natural waters, in places, and at times, when these could not be procured. The illustrious Bergman, in his excellent Treatise on Mineral Waters, has given very good ideas on the method of preparing them artificially; but some of the processes which he proposes, are imperfect, and liable to objections. Where the water to be imitated is only a solution of some neutral salts, such, for instance, as the Epsom, Sedlitz, or Sea water, all that it is necessary to know, is the proportion in which they are contained in the natural spring; but the processes of nature are not always imitated with so much ease. A greater difficulty lay in the way, which was, that of impregnating water with gaseous substances to as complete a saturation as is found in some of the most powerful mineral springs. This every chemist knows to be a very difficult object to attain, and impracticable with any of the more common apparatus now in use for such purposes; but, under particular management, it has been attained, and some of the specimens of artificially carbonated water that are to be seen, appear fully to equal in this respect the natural waters of Pyrmont or Seltzer. The saline and chalybeate principles may also be easily added, and the imitation will be complete for all medical purposes."

A Practical Treatise on the different Fevers of the West Indies, and their Diagnostic Symptoms. By WILLIAM FOWLE, M. D. 8vo. pp. 93. London, 1800. Symonds.

Dr. F. in common with many of his brethren, had been struck with the discordance of medical authors on the subject of the fevers of the West Indies; therefore, when he was appointed Physician to the forces on that station, he determined to use his best endeavours to elucidate a subject of so much national importance.

" Very

"Very early after my arrival in the country, I observed, that persons attacked with fever, in almost any situation, very generally became yellow. This soon led me to conceive it merely a concomitant symptom, and by no means such as could be sufficiently characteristic of any one fever, to give it a particular denomination; it also led me to discover the cause of the variety of symptoms attributed by different authors to the Yellow Fever, and to account for successful methods of cure which were often diametrically opposite to each other. The longer I remained in the country, the more I was convinced of the danger attendant on giving a name to one disease from a symptom common to so many. An order coming out, that all the medical officers at that time on the Leeward Island staff should deliver in their opinions on the diseases of the troops in the West Indies, together with the most successful method of cure, &c. through the Inspector General of the Leeward Island Hospitals, to the Army Medical Board; I conceived I could not better answer the purpose proposed, than by submitting to them the observations I had made on the different diseases, laying a considerable stress on those symptoms that seem to point out more particularly the different fevers one from another; the mode of treatment being so essentially different, and the fevers of that climate being so quick in their progress, as to make a few hours' delay, for the purpose of ascertaining their tendency to remission, productive of the most imminent danger. In doing this, I found more matter than I expected press on me; and though I began with an intention of comprising all I had to say in a few sheets, I found at the conclusion that I had written a little volume. On my return to England, having frequent occasion to converse with some medical friends on the subject of those diseases which I had been most in the habit of observing, and finding it difficult to explain my ideas as perfectly as I wished in conversation, I put a copy of the work into their hands. The observations there contained were conceived by them to lead to some important points of practice. I was advised and desired to make such additions as might render them more instrumental to the service of those who are likely to be engaged in the same line, and to offer them to the perusal of the public.

"I have now complied with those desires; and at the end of this work, I have also added a few prescriptions for the use of young men who may be sent to that country, immediately on entering the army. I am well convinced, that such formulæ, having nothing very particular in them, might, for the generality of readers, have been well omitted: but, from experience, I feel myself authorised to say, that many young men, who may undergo very strict examinations on the subjects of anatomy, surgery, and the symptoms and general cure of diseases, have still much to learn as to the compositions of medicines and their proper doses; and I here beg leave earnestly to request a more proper degree of attention to that subject."

Dr.

Dr. F. divides the fevers of the Weſt Indies into intermittents, remittents, ardent fever, and the malignant or jail fever. On the diagnoſtic ſymptoms of theſe varieties of fevers, he ſays,

" It may aſſiſt the reader if we bring together what has been ſcattered in the former chapters concerning the different ſituations, ſeaſons of the year, and predispoſitions, which conduce to the production of the various fevers.

" We may obſerve that the ardent fever requires a certain degree of firmneſs of fibre: it reigns moſt commonly at that period of the year when the ſky is clear; when the atmoſphere ſeems little, if at all, loaded with vapour, and when the heat is great. The objects of its attack are the ſtout and athletic, young or middle aged men, or women who in their conſtitutions and habits nearly reſemble them, and thoſe who have lately arrived either from Europe or North America, or from the more mountainous ſituations in the Weſt Indies themſelves. It is prevalent in the dry ſandy bays, and is often induced by perſons who have been much heated being ſuddenly expoſed to cold.

" The remitting fever, on the contrary, ſeems to require a previouſly debilitated body: it is moſt frequent at thoſe periods of the year, when, the ground having been ſuperſaturated by the rains, the whole atmoſphere becomes loaded with noxious vapour. Perſons who have lived for ſome time in the Weſt Indies are by no means freed from its power, and women and children ſuffer ſeverely from it, as do alſo thoſe who have been debilitated by previous illneſs or long continued fatigue. It delights in the low ſwampy marſhes, in the neighbourhood of lagoons, in uncultivated ſituations, where the currents of air are impeded, and on the ſmaller hills which are ſubject alternately to the ſwampy vapours, and the cold ſtorms.

" The gaol fever is ſeldom to be met with except on board of ſhips or in crouded towns, or in individuals who have been expoſed to the contagion of ſuch places.

" This recapitulation may lead us to a very important point of practice; it may teach us to be very minute in our enquiries into the former manner of living of our patient, and alſo into his previous reſidence and other circumſtances: for it muſt appear to be the height of imprudence to bleed a man profuſely, and to have recourſe to other violent evacuations to a very great extent, though he ſhould be young in appearance, robuſt, and attacked in a dry hot ſituation, when we might find, by a more minute enquiry, that this man has, for weeks previous to his illneſs, been undergoing immenſe fatigue, in ſituations too the moſt expoſed to ſwampy vapours, and perhaps with but ſpare diet and little ſleep. Nor is this ſuppoſing a caſe merely for the ſake of illuſtration; the thing itſelf is continually occurring. Small detachments from regiments are frequently ſent not only from one part of an iſland to another, but alſo to different iſlands; ſoldiers thus detached are very apt to be ſeized with fevers, not only from change of air, which I have before aſſerted to be a very frequent exciting cauſe, but

but alſo from having greater opportunities of obtaining ſpirits. The danger of following this evacuating plan in a man who has been expoſed to the influence of contagion muſt be ſtill more evident.

" On the contrary, where the patient happens to be attacked ſoon after he comes into the neighbourhood of ſwampy ſoils, not having before been expoſed to any debilitating cauſes, we ſurely may be more free in our evacuations, than in a more weakened perſon, or one who had been a longer reſident.

" We may obſerve that the mode of attack differs conſiderably in the three fevers. While the gaol fever is commonly preceded, for ſome hours, often for a day or two, by languors and tranſient alternations of chills and flaſhes, and the remitting has a *rigor*, generally ſtrong but always ſufficiently evident, the ardent fever commonly makes its attack of a ſudden, and with little or no *rigor*, and the patient, from being in apparent ſound health, is hurried inſtantly into the midſt of diſeaſe. The proſtration of ſtrength alſo, though very great both in the remitting and typhus, yet bears no proportion to that in the ardent: the pain in the head, back, and limbs is conſiderable in all, but in the ardent there is moſt commonly a violent pain in the middle of the thighs. The pain alſo of the head is different in the various fevers: in the ardent, it is principally fixed over the orbit of each eye; while there is only a dull heavy pain over the reſt of the head: in the remitting, the pain is violent and continued over the whole head; while in the gaol fever it ſeems rather to be a ſucceſſion of pulſations, giving an idea to the patient that his head is forcibly opening and ſhutting. There is little vomitting, except juſt in the early attack of gaol fever, but in both the others, it is a troubleſome and dangerous ſymptom: in the remitting, there is generally a quantity of bile thrown up, frequently of a green colour, but this ſeldom or never happens in the ardent. So conſtantly indeed is this the caſe, that where bile is vomitted up, and there has been ſenſible *rigor*, I ſhould have ſcarcely any doubt in pronouncing the fever not to be of the ardent type: and there is alſo in the latter a ſenſation of burning at the pit of the ſtomach.

" The countenance in the gaol fever is commonly, although ſlightly ſuffuſed, yet of a dirtyiſh hue, and by no means tumid, and there is commonly violent pulſation of the carotid arteries. In the remitting, after the hot fit is formed, the ſuffuſion is great, but the tumour by no means ſo evident, particularly about the fauces and neck, as in the ardent. The mode of ſpeaking alſo is very different: in this, it is confuſed and thick; in the remitting, it varies only from health in a quickneſs, owing to the anxiety of the patient, not to any particular debility of the organs of ſpeech; and in the gaol fever it is generally a quickneſs of ſpeech for a word or two, rather as if from impatience at being diſturbed, or elſe it is plaintive and querulous. Neither in the remitting nor typhus has the patient any of that appearance as of intoxication, which is frequently to be obſerved in the ardent fever.

" The tongue in typhus is generally very tremulous when put out: it is from the beginning furred, and ſoon becomes dry and chapped; and, towards the latter ſtages of the diſeaſe, the tongue and lips are covered with black and looſe ſaburra, floating like cobwebs, or they have a number of apthæ over their ſurface. In the remitting, the tongue is furred, but in no degree, and, as the diſeaſe advances, this fur becomes brown, but there is in general ſome moiſture on it to the laſt. In the ardent fever the tongue has no fur upon it; on the contrary, we may call it morbidly clean: it is rather moiſt, and of a bright red colour: as the diſeaſe advances, it ſometimes becomes dry, at others not ſo, but always continues clean The thirſt is not ſo great as we might be led to expect in this fever, from the vehemence of the ſymptoms, neither is it in any proportion to what is felt in the others. In this fever alſo, while the proſtration of ſtrength is very great, the vomiting, burning heat of the ſtomach, and reſtleſſneſs are violently urgent, and the heat of the ſkin intenſe. The pulſe varies very inconſiderably, either in ſtrength or quickneſs from its natural ſtate, but in the other fevers, it is amongſt the firſt ſymptoms to ſhew a derangement of the ſyſtem.

" The delirium is very different alſo: in the ardent fever, it is of the moſt fierce kind. The patient generally imagines himſelf in the preſence of his moſt bitter enemies, who are either attacking him, or whom he is endeavouring to attack; the eye-balls are ſtrained, the whole countenance puts on the moſt terrific aſpect, and it often requires two or three perſons to hold him in his bed. The delirium in the remitting is ſeldom ſo fierce; it is generally mild, the imagination of the patient buſying itſelf with his former occupations and purſuits; while that of typhus ſeems ſcarcely to amount to more than a want of power of attention in the ſick perſon to any thing about him; for during the time he is uttering the moſt incoherent nonſenſe, if he be rouſed, he gives a rational anſwer, but immediately relapſes into his incoherent fit.

" Theſe are the ſymptoms which are moſt diſſimilar in the different fevers. I have purpoſely omitted the yellowneſs of the ſkin, the black vomit, and the hæmorrhages from different parts of the body, as I have ſeen them occur in every ſpecies of fever in the tropical climates."

A Treatiſe on Opthalmy, and thoſe Diſeaſes which are induced by Inflammations of the Eyes, with new Methods of Cure. Part the Firſt. By EDWARD MOORE NOBLE, Surgeon, 8vo. pp. 144. London, 1800, Robinſons.

THE Author's reaſons for appearing before the public on this ſubject, are thus ſtated by him:—

" The art of curing diſeaſes has, of late years, made rapid ſtrides towards arriving at that *acmé* of perfection, beyond which it is not in the power of man to advance it. The light which has been let in upon us, by the doctrines of that great genius, Dr. John Brown,

Brown, and ſo ably ſeconded by a Darwin, and a Beddoes, has laid the foundation of a new æra in the annals of medicine, and has opened new views to the practitioner, in the theory and treatment of diſeaſes.

" Since that epoch no regular treatiſe, on the inflammation of the eye, has appeared, in which the mode of treatment has been founded on ſyſtematic principles; and when we conſider the importance and delicacy of that organ, we ſhall be ſurpriſed to find, how little has been done, towards arriving at a rational plan of cure.

" The regular routine of bleeding, bliſters and cathartics, with a variety of external applications, are generally indiſcriminately applied, with little attention to the nature, or the period of the diſeaſe; and there are ſome practitioners who act with ſtill greater inconſiſtency, and maintain, that it is uſeleſs to inſpect the eye; that it cauſes an unneceſſary degree of irritation; and that we ought to truſt entirely to internal medicines.

" It is my intention to endeavour to point out the propriety of a certain mode of treatment, and to diſcriminate the proper time for the uſe of different applications.

" On the firſt attack of an Opthalmy, the general circulation of the maſs of fluids is not evidently increaſed, though it may be ſo in a ſhort time, from the pain and irritation of the eye; I therefore conſider the diſeaſe as a topical affection, and that we ought chiefly to rely on local applications for a cure.

" In ſpeaking of the cauſes of Opthalmy, I have divided them into an increaſe of ſtimulus, or an increaſe of that ſomething to which I have given the name of the irritable principle; but whether it ought to be conſidered as a quality of vitality, or as ſupplied by the brain, or from the atmoſphere, I have not ventured to riſk an opinion.

" It probably may be thought, for a Treatiſe on the Opthalmy, I have entered into too long a digreſſion upon the effects of *ſtimuli* applied to the body, and have been too prolix upon the laws relative to the accumulation or exhauſtion of this irritable principle. Much more might undoubtedly have been ſaid, which would have better elucidated the doctrine, but I wiſhed not to take up too much of my reader's time upon the diſcuſſion, and I knew not how, in ſaying leſs, to properly explain my ideas on thoſe ſubjects.

" It may, perhaps, not be improper in this place, to take a general view of what is intended to be given in the Second Part, which will conclude this Treatiſe.

" In the firſt place I ſhall enter upon the cure of the inflammation of the eye.

" In the laws of the animal economy, there is ſcarce any fact more clear than a *ſtimulus* ſtronger than uſual being applied to the moving fibre, makes it leſs eaſily excited into action, and that on the ſudden ſubſtraction of this increaſed *ſtimulus*, the motions of the part will be diminiſhed.

" Upon this law will depend my method of cure of the Opthalmy. The treatment of the diſeaſe admits of a variety of mo-

dications; but my principal object will be the application of a *ſtimulus*, in a peculiar manner, as great as they can bear, without being thrown into convulſive motions, and when this *ſtimulus* loſes its effect of cauſing pain, to ſuddenly remove it, and diminiſh all *ſtimuli*, or irritating cauſes, as much as poſſible.

" By theſe means a diminiſhed action of the veſſels will be induced, the pain will be moderated, and an alleviation of the ſymptoms will take place.

" I hope to be able to ſend the Second Part, which will conclude this Treatiſe, to the preſs the beginning of next year."

The above extract will enable our readers to form a judgment of the Author's ſtile and principles of practice.

Mr. Davy's Chemical and Philosophical Researches.

[Continued from pp. 265—269, of our laſt.]

The following experiments are a proof of Mr. D's intrepidity, and of the deleterious effects produced by the reſpiration of hydrocarbonate.

" In the firſt experiment I breathed for near a minute, three quarts of hydrocarbonate mingled with nearly two quarts of atmoſpheric air. It produced a ſlight giddineſs and pain in the head, and a momentary loſs of voluntary power; my pulſe was rendered much quicker and feebler. Theſe effects, however, went off in five minutes, and I had no return of giddineſs.

" Emboldened by this trial, in which the feelings were not unlike thoſe I experienced in the firſt experiments on nitrous oxide, I reſolved to breathe pure hydrocarbonate.

" For this purpoſe, I introduced into a ſilk bag, four quarts of gas nearly pure, which was carefully produced from the decompoſition of water by charcoal an hour before, and which had a very ſtrong and diſagreeable ſmell.

" My friend, Mr. James Tobin, jun. being preſent, after a forced exhauſtion of my lungs, the noſe being accurately cloſed, I made three inſpirations and expirations of the hydrocarbonate. The firſt inſpiration produced a ſort of numbneſs and loſs of feeling in the cheſt and about the pectoral muſcles. After the ſecond inſpiration, I loſt all power of perceiving external things, and had no diſtinct ſenſation, except a terrible oppreſſion on the cheſt. During the third expiration, this feeling diſappeared, I ſeemed ſinking into annihilation, and had juſt power enough to drop the mouth-piece from my uncloſed lips. A ſhort interval muſt have paſſed, during which I reſpired common air, before the objects about me were diſtinguiſhable. On recollecting myſelf, I faintly articulated, '*I do not think I ſhall die.*' Putting my finger on the wriſt, I found my pulſe thread-like, and beating with exceſſive quickneſs.

" In leſs than a minute I was able to walk, and the painful oppreſſion on the cheſt directed me to the open air.

" After making a few ſteps, which carried me to the garden, my

my head became giddy, my knees trembled, and I had juſt ſufficient voluntary power to throw myſelf on the graſs. Here the painful feeling of the cheſt increaſed with ſuch violence, as to threaten ſuffocation. At this moment, I aſked for ſome nitrous oxyde Mr. Dwyer brought me a mixture of oxygene and nitrous oxyde. I breathed this for a minute, and believed myſelf relieved. In five minutes, the painful feelings began gradually to diminiſh; in an hour they had nearly diſappeared, and I felt only exceſſive weakneſs and a ſlight ſwimming of the head. My voice was very feeble and indiſtinct. This was at two o'clock in the afternoon.

" I afterwards walked ſlowly, for about half an hour, with Mr. Tobin, jun. and on my return was ſo much ſtronger and better, as to believe that the effects of the gas had diſappeared; though my pulſe was 120, and very feeble. I continued without pain for near three quarters of an hour, when the giddineſs returned with ſuch violence as to oblige me to lie on the bed; it was accompanied with naufea, loſs of memory, and deficient ſenſation. In about an hour and a half the giddineſs went off, and was ſucceeded by an excruciating pain in the forehead and between the eyes, with tranſient pains in the cheſt and extremities.

" Towards night theſe affections gradually diminiſhed. Between eight and ten, I took, by the advice of Dr. Beddoes, two or three doſes of diluted nitric acid. At ten, no diſagreeable feeling except weakneſs remained. I ſlept ſound, and awoke in the morning very feeble and very hungry. No recurrence of the ſymptoms took place, and I had nearly recovered my ſtrength by the evening.

" I have been minute in the account of this experiment, becauſe it proves, that hydrocarbonate acts as a ſedative; i. e. that it produces diminution of vital action, and debility, without previouſly exciting. There is every reaſon to believe, that if I had taken four or five inſpirations inſtead of three, they would have deſtroyed life immediately, without producing any painful ſenſation.—Perhaps moſt of the uneaſy feelings after the experiment, were connected with the return of the healthy condition of organs.

" About a week after this experiment, I attempted to reſpire carbonic acid, not being at the time acquainted with the experiments of Roſier.

" I introduced into a ſilk bag four quarts of well waſhed carbonic acid produced from carbonate of ammonia by heat; and after a complete voluntary exhauſtion of my lungs, attempted to inſpire it. It taſted ſtrongly acid in the mouth and fauces, and produced a ſenſe of burning at the top of the uvula. In vain I made powerful voluntary efforts to draw it into the wind-pipe; at the moment that the epiglottis was raiſed a little, a painful ſtimulation was induced, ſo as to cloſe it ſpaſmodically on the glottis; and thus, in repeated trials, I was prevented from taking a ſingle particle of carbonic acid into my lungs.

" I tried

" I tried to breathe a mixture of two quarts of common air and three of carbonic acid, without success; it stimulated the epiglottis nearly in the same manner as pure carbonic acid, and was perfectly non-respirable.

" I found that a mixture of three quarts of carbonic acid with seven of common air was respirable; I breathed it for near a minute At the time, it produced a slight degree of giddiness, and an inclination to sleep These effects, however, very rapidly disappeared after I had ceased to breathe, and no other affections followed.

" During the course of experiments on nitrous oxyde, I several times breathed oxygene procured from manganese by heat, from three to five minutes.

" In respiring eight or ten quarts; for the first two or three minutes I could perceive no effects. Towards the end, even when I breathed very slowly, my respiration became oppressed, and I felt a sensation analogous to that produced by the want of fresh air; though but little of the oxygene had been consumed.

" In one experiment, when I breathed from and into a bag containing twenty quarts of oxygene for near six minutes, Doctor Kinglake felt my pulse, and found it not altered in velocity, but rather harder than before. I perceived no effects but those of oppression on the chest.

" Having observed in my experiments upon venous blood, that nitrous gas rendered that fluid of a purple tinge, very like the colour generated in it by nitrous oxyde; and finding no painful effects produced by the application of nitrous gas to the bare muscular fibre, I began to imagine that this gas might be breathed with impunity, provided it were possible in any way to free the lungs of common air before inspiration, so as to prevent the formation of nitrous acid.

" On this supposition, during a fit of enthusiasm produced by the respiration of nitrous oxyde, I resolved to endeavour to breathe nitrous gas.

" One hundred and fourteen cubic inches of nitrous gas were introduced into the large mercurial airholder; two small silk bags of the capacity of seven quarts were filled with nitrous oxyde.

" After a forced exhaustion of my lungs, my nose being accurately closed, I made three inspirations and expirations of nitrous oxyde in one of the bags, to free my lungs as much as possible from atmospheric oxygene; then, after a full expiration of the nitrous oxyde, I transferred my mouth from the mouth-piece of the bag to that of the airholder, and turning the stop-cock, attempted to inspire the nitrous gas.—In passing through my mouth and fauces, it tasted astringent and highly disagreeable; it occasioned a sense of burning in the throat, and produced a spasm of the epiglottis, so painful as to oblige me to desist instantly from attempts to inspire it. After moving my lips from the mouth-piece, when I opened them to inspire common air, aëriform nitrous acid was instantly formed in my mouth, which burnt the tongue

tongue and palate, injured the teeth, and produced an inflammation of the mucous membrane, which lasted for some hours.

"As after the respiration of nitrous oxyde in the experiments in the last Research, a small portion of the residual atmospheric air remained in the lungs, mingled with the gas, after forced expiration; it is most probable that a minute portion of nitrous acid was formed in this experiment, when the nitrous gas was taken into the mouth and fauces, which might produce its stimulating properties. If so, perhaps I owe my life to the circumstance; for supposing I had taken an inspiration of nitrous gas, and even that it had produced no positive effects, it is highly improbable, that by breathing nitrous oxyde, I should have freed my lungs from it, so as to have prevented the formation of nitrous acid when I again inspired common air. I never design again to attempt so rash an experiment.

"In the beginning of September I often respired nitrous oxyde mingled with different proportions of common air or oxygene. The effects produced by the diluted gas were much less violent than those produced by pure nitrous oxyde. They were generally pleasant: the thrilling was not often perceived, but a sense of exhiliration was almost constant.

"Between September and the end of October, I made but few experiments on respiration, almost the whole of my time being devoted to chemical experiments on the production and analysis of nitrous oxyde.

"At this period my health being somewhat injured by the constant labour of experimenting, and the perpetual inhalation of the acid vapours of the laboratory, I went into Cornwall; where new associations of ideas and feelings, common exercise, a pure atmosphere, luxurious diet, and moderate indulgence in wine, in a month restored me to health and vigor.

"Nov. 27th. Immediately after my return, being fatigued by a long journey, I respired nine quarts of nitrous oxyde, having been precisely thirty-three days without breathing any. The feelings were different from those I had experienced in former experiments. After the first six or seven inspirations, I gradually began to lose the perception of external things, and a vivid and intense recollection of some former experiment passed through my mind, so that I called out, "*what an amazing concatenation of* "*ideas!*" I had no pleasurable feeling whatever, I used no muscular motion, nor did I feel any disposition to it; after a minute, when I made the note of the experiment, all the uncommon sensations had vanished; they were succeeded by a slight soreness in one of the arms and in the leg: in three minutes these affections likewise disappeared.

"From this experiment I was inclined to suppose that my newly acquired health had diminished my susceptibility to the effects of the gas. About ten days after, however, I had an opportunity of proving the fallacy of this supposition.

"Immediately after a journey of 126 miles, in which I had no sleep

ſleep the preceding night, being much exhauſted, I reſpired ſeven quarts of gas for near three minutes. It produced the uſual pleaſurable effects, and ſlight muſcular motion. I continued exhilarated for ſome minutes afterwards: but in half an hour found myſelf neither more or leſs exhauſted than before the experiment. I had a great propenſity to ſleep.

" I repeated the experiment four or five times in the following week, with ſimilar effects. My ſuſceptibility was certainly not diminiſhed; I even thought that I was more affected than formerly by equal doſes.

" Though, except in one inſtance, when indeed the gas was impure, I had experienced no deciſive exhauſtion after the excitement from nitrous oxyde, yet ſtill I was far from being ſatisfied that it was unanalogous to ſtimulants in general.—No experiment had been made in which the excitement from nitrous oxyde had been kept up for ſo great a length of time, and carried to ſo great an extent as that in which it is uniformly ſucceeded by exceſſive debility under the agency of other powers.

" It occurred to me, that ſuppoſing nitrous oxyde to be a ſtimulant of the common claſs, it would follow that the debility produced in conſequence of exceſſive ſtimulation by a known agent, ought to be *increaſed* after excitemen. from nitrous oxyde; in the ſame manner as the debility from intoxication by two bottles of wine is increaſed by a third.

" To aſcertain whether this was the caſe, I made on December 23d, at four P. M. the following experiment: I drank a bottle of wine, in large draughts, in leſs than eight minutes. Whilſt I was drinking, I perceived a ſenſe of fulneſs in the head, and throbbing of the arteries, not unanalogous to that produced in the firſt ſtage of nitrous oxyde excitement. After I had finiſhed the bottle, this fulneſs increaſed, the objects around me became dazzling, the power of diſtinct articulation was loſt, and I was unable to walk ſteadily. At this moment the ſenſations were rather pleaſurable than otherwiſe, the ſenſe of fulneſs in the head ſoon however increaſed ſo as to become painful, and in leſs than an hour I ſunk into a ſtate of inſenſibility. In this ſituation I muſt have remained for two hours or two hours and a half."

[To be continued.]

De la Peſte, ou les Epoques memorables de ce Fleau, i. e. On the Plague, or the memorable Epochs of this Evil, and the Means of preventing it. By J. P. Sapon, &c. Paris, for Lavilette and Co. 2 vol. 8vo. pp. 300.

The meaſures which are taken in the different ports of the Mediterranean, to prevent the infection of the plague, may be ſufficient in time of peace; but in time of war, where the general police can be eaſily diſturbed, and the laws on which the welfare of nations

tions rely, sometimes neglected by circumstances, it would undoubtedly be very imprudent to consider ourselves equally secure. In the general agitation of things in which we now live, this scourge of mankind may steal into Europe in more than one way. The different means to import smuggled wares may, particularly at this time, open a way to this evil, to pass the barriers which are opposed to it; and there are likewise instances of its having escaped from military hospitals under the apparent symptoms of a common epidemic disease, when it afterwards assumed the character of a true plague.

Amidst so many critical and dangerous circumstances, *Cit. Sapon* has endeavoured to serve the community, by collecting every thing that experience and observation have taught the best informed physicians, or the persons that superintended the execution of those laws for preventing the plague. After having, in the introduction, made some reflections on the origin and causes of the plague, he proceeds to give, in the *first* volume, the history of this evil, considered in its most remarkable epochs; he speaks of the plague of *Athens* in the year 335, before the Christian era; of that of *Constantinople* in the year of our Lord 542; of that in 1347, otherwise called the *black plague*; of that of *Milan*, 1629 and 30; of that of *Lyons*, 1628 and 29; of that of *Montpelier*, 1629; of that of *Digue*, 1629; of that of *Marseille*, 1720; and of that of *Toulon* and *Aix* in the same year.

By presenting thus to the reader the ravages of the plague, its accidents, symptoms, and character, by conducting him to the dismal scenes of a desolate city, and of a person afflicted with the plague, and struggling against pains and inevitable death, the author attempts to awaken the attention of Governments and individuals, to caution themselves with every possible care against the most insidious and dangerous enemy of mankind; and he concludes this volume with giving an account of the steps and measures that were taken in those dangerous times.—We do not suppose that candid readers will expostulate with the author for only having given the alarm, by representing this picture of misery and desolation, occasioned by the plague; and had he published his work without adding the administrative and preventive part, he might have deserved this reproach. Such a false delicacy, however, may sometimes do much harm, by hiding from us the danger and of course preventing us from taking proper measures.—In the *second volume*, he treats of the laws which ought to be established in all sea ports, where there is the greatest danger of the plague being imported. The whole terminates with an historical chronology of the plagues that ravaged Europe before and after the Christian æra.

Archive für die Medicinische Landerkunde, i. e. Archives for the Medical Knowledge of Countries, Vol. I. *No.* 1. Koburg & Leipzic, for J. C. Sinner, 8vo. 1800.

The Author professes this first number of a new periodical publication, devoted to the medical knowledge of countries, to be nothing but a trial of the kind, to see whether the plan conceived by the

author of collecting medico-topographical notices of ſingle countries and places, which are here and there ſcattered, will meet with the approbation of the public. He gives in this number fragments of medical topographies extracted from different known Journals, that of *Hufeland*, &c. The places he acquaints us with, are different towns of Germany, as *Clauſthal*, on the Harz foreſt, *Weymar*, &c. to which is added a deſcription of the hoſpital at *Bamberg*, one of the beſt in Germany.—The intereſt of ſuch an undertaking, as well for the phyſician as the geographer, appears evident; and it is to be wiſhed, that the Editor may be ſufficiently ſupported, to enable him to enlarge his plan, and to conduct and execute it properly.

Erfahrungen über den Runkel ruben Zucker, i. e. Experiments on the ſugar of the Beet Root, with ſome ideas and propoſals on its fabrication upon a large ſcale, and on the culture of the beet root.—By W. A. Lampsadius, Profeſſor of chemiſtry at Freyberg. 1800. (8vo. pp. 84.) Freyberg, for Cratz, price 12 groſhen, or nearly 2s.

This pamphlet is one of the beſt that has appeared on the ſubject. The experiments are made with beet roots, cultivated both in the common way and after the method of Achard; but the proportion of ſugar that is obtained varies according to the ſoil wherein they grow. The land required for their culture, to make them productive of ſugar, muſt be looſe, eaſily drying, and well manured, and at the ſame time be ſufficiently expoſed to the action of the ſun. By a chemical analyſis, he found them to contain, of water, from 92 to 94 per cent. ſugar 2—3$\frac{1}{3}$ per cent. mucous matter, 2—3, of albuminous and farinaceous matter, but a ſmall quantity, beſides ſome odorate; and in the yellow variety ſome colouring principle and a bitter taſting *fixed* matter, &c. He then relates his procedures for obtaining ſugar. The juice, after the roots have been ground, is expreſſed in a ſtrong bag of horſe-hair, and boiled for 10 to 15 minutes, with the addition of charcoal powder and as much lime, till the blue vegetable colour is no more changed by the juice, while it is continually ſtirred and the ſcum taken off. After this, it is filtered warm through flannel, and quickly cooled by pouring it into flat veſſels, and afterwards clarified in a proper veſſel with milk, that has been before fleeted. It is then, after 24—36 hours, again poured into a flat copper veſſel, which is well tinned within, and expoſed to evaporate at 50° of *Reaumur*, till one-third of the juice is gone, and it has obtained the conſiſtency of a thin ſyrup. Let it now ſtand for 48 hours till it be cooled, and begin the evaporation again at 40° in flat diſhes, till a cuticle appears on the ſurface of it. In this way the cryſtals appear in the greateſt quantity, and the mucous matter ſeparates a great deal better. The cryſtals are at laſt expreſſed, the ſyrup diſtilled for making brandy, and the waſte parts uſed for feeding cattle. The juice is made ſtronger by froſt, and requires afterwards not ſo much fire. After having mentioned ſomething about the eſtabliſh-

ment

ment of sugar works, he concludes with proposing different mixtures of earths in which the beet roots may best prosper, and with giving an account of the expences and profit of 100 quintals of the beet root, when treated for obtaining sugar, syrup, and brandy from them.

Beytrag zur Beurtheilung, i. e. Contribution to a Criticism of the Brunonian System of Medicine, and the late Researches upon it; by Dr. CAPPEL, second edition, 1800, pp. 424, 8vo. Gottingen, Dieterich.

THE first edition of this well written work, containing 142 pages, appeared in 1797; the present is therefore considerably augmented, and in many respects altered. The author professes in this, a greater tendency to Brunonian principles than in the former, and retracts many objections he thought proper at that time to maintain. In the introduction, he states the rules by which a system of medicine ought to be judged. Medicine, as an empirical science, can never aim at a strict scientific perfection; and a system of it deserves sufficient credit, if it unites under certain principles all facts, with which experience has supplied us. But as experience and observation, the true sources of a practical system, are continually increasing, it is likewise probable, that this may produce changes in the system. Imperfection is therefore a charge by no means sufficient to subvert a system, which in general answers the following requisites: 1. That it proposes general principles as fundamental, abstracted from experience. 2. That these general principles are applicable to all possibles cases. 3. That the applications deduced from those general principles are just and consistent. 4. That they are useful in practice. After having previously given a sketch of Brown's principles, the author proceeds to the criticism in the following chapters: Chap. 1. *On Brown's definition of life.* Chap. 2. *On Brown's excitability.* Chap. 3. *On Brown's principles with respect to the stimuli, as acting upon living bodies.* Chap. 4. *On the laws stated by Brown for excitability and excitement.* Chap. 5. *On Brown's definition of the different states of life.* Chap. 6. *On Brown's diagnostic.* Chap. 7. *On Brown's materia medica.* Chap. 8. *On Brown's therapeutic, and the examination of the Brunonian system in general*, which the author concludes as follows: "After all, we can assert, that the principles of the Brunonian System are almost satisfactory, and the system itself does, with few exceptions, answer the requisites of a system of medicine." How far this may be allowed, we leave our readers to decide.

Ueber die Pulsader Geschwulste, i. e. On Aneurisms and their Surgical Treatment; by Dr. AUG. FR. AYRER, 1800, 8vo. with a plate. Gottingen, Dieterich.

THIS publication comprises every thing that has been written on Aneurisms, their different species, causes, and symptoms, which

the author has faithfully collected, and to which he has added, the accurate anatomical description of those vessels in which that disease frequently occurs. The author afterwards proceeds to give a critical account of the different methods of treatment and operations used in that disease. Now and then he has interspersed his own observations, made in the hospitals of Italy and France; and proposed an improvement of two instruments for the compression and ligature of the arteries, by which only the vessel is pressed, and not the whole limb. On the whole, it is a very useful compilation, as it contains a complete history of an interesting surgical disease, by which much time is saved to any one, who means to read every thing that has been written on it in different countries.

Plantae rariores Hungariae indigenae Descriptionibus et Iconibus illustratae a comite Francisco Waldstein, Caes. Reg. Camerario et ordinis Melitensis equite et Paulo Kitaibel, M. D. Chem. et Bot. Prof. Pesthi, Decas I. II. III. 1800, gr. folio, pp. 28, and 50 coloured plates, price 15 florins each Decas, or about 1*l.* 5*s.* Viennæ, Schauenburg.

It is with pleasure we announce this publication, which is certainly very interesting to a botanist. Of all parts of Europe, the extensive kingdom of Hungary was hitherto but very little, if not at all, botanically searched, and we only know a few plants of that country from the celebrated Mr. Jacquin. Its extent, however, and variety of soil, produces an astonishing variety of vegetables, and many plants. Siberian, Grecian, Piedmontese, Austrian, and even some African, grow here spontaneously, together with some new ones, and the more common plants of Europe. The authors have some years made, and are still making, excursions towards all directions of this kingdom, for the sake of collecting its vegetable productions; of which they intend to figure and describe the rarer and new species. The work is to be published by decades, of which ten will make a volume: the plates are neatly engraved and elegantly coloured, almost in the stile of Jacquin's works, which, however, they surpass in many respects: the descriptions seem to be accurate. The present three decades contain the following rare and new plants, viz. *Lactuca sagittata, Achillea ligulata, Lepidium crassifolium, Scabiosa longifolia, banatica, corniculata; Symphytum cordatum, Alyssum murale, Silene longiflora, Vinca herbacea, Carduus radiatus, Phyteuma canescens, Nymphæa lotus, Cineraria sibirica, Allium atropurpureum, Saxifraga hieracifolia, Crepis rigida, Peucedanum arenarium, Aster canus, &c.*

MEDICAL

MEDICAL AND PHYSICAL INTELLIGENCE.

Observations on the Effects of Acetic Ether applied by Friction in Rheumatic Complaints, by G. MARTIN. *Read at the Society of Medicine at Paris.*

WHEN I read the memoir of Citizen Sedillot the younger, on the acetic ether, inserted in the second volume of the Recueil Periodique, &c. I was thinking what an useful remedy it would prove in our country, where the frequent change of weather often succeeding with astonishing rapidity, gives occasion to many rheumatic complaints, if its efficacy was confirmed by numerous experiments carefully made. I soon found an opportunity of trying it, and the constant success, together with the desire of seeing it more generally employed by practitioners for diminishing the cruel pains of many people afflicted with rheumatisms, has induced me to communicate to the Society of Medicine the following observations:

Observ. 1. Citizen *Viard*, of a choleric temper, 55 years old, had for a long time been subject to rheumatic complaints, which attacked the superior as well as inferior parts of the body, but had generally yielded to an antibilious treatment, and the topical applications that are commonly in use. The paroxysms of these rheumatic complaints had not recurred since the time he began to use the hot baths of Rennes; having, however, omitted this for two years, he was, on the 13th of Prairial, attacked with an ischiatic pain, extending from the hip to the extremity of the foot; the colour of the skin was not changed, but only a slight inflammation perceived on the lower and outer part of the leg. The two principal seats of the pain were about the hip and the articulation of the foot with the leg. Though the patient was without fever, he suffered extremely from the acute pains, which hardly let him keep the same situation for a moment; sleep had almost left him, and he had no appetite, &c. After having used for nearly two months different remedies, externally and internally, that seemed to be indicated by the present symptoms, without obtaining much favourable change in the state of the patient, who felt himself but very little relieved; I determined to employ the acetic ether in frictions, and got it accordingly prepared after the method of Cit. Sedillot. The patient was now rubbed on the whole extent of the pain every twelve hours, till six frictions had been applied, in which, each time, half an ounce of the ether was consumed. After each friction, the patient was kept warm in his bed. On the third application, he began to feel himself relieved; and on the sixth, he was so far cured, that he could walk the next day to

to his country houſe, which was one league diſtant from the town; whereas, three days before, he had not been able to move from one corner of the room to the other. After each friction an agreeable heat ſpread itſelf over the ſkin, which ſeemed to acquire more ſoftneſs, accompanied by a local perſpiration, ſoon becoming general, and continuing for ſome time.

Obſerv. 2. Cit. Eſpallat was affected with a lumbago, attended with ſuch violent pains, that from the firſt attack he could not enjoy the leaſt repoſe. After having been treated, without avail, nearly a month with the uſual remedies, he was told by Cit. Viard of the ſucceſsful effect he had himſelf experienced from the frictions with acetic ether. Being now applied to, I employed the ether accordingly in friction; at the the fourth application of which, the patient found himſelf conſiderably relieved; and after the ſixth, the cure was ſo completely performed, that he left the bed and room, and was able to attend his uſual buſineſs. It is to be remarked, that each friction brought on likewiſe a pretty abundant perſpiration.

Obſerv. 3. Cit. Touret was ſeized with iſchiatica, attended with moſt violent pains. The patient having no fever, I adminiſtered the ether in friction on all the painful parts; however, though the firſt frictions p oduced an abundant local perſpiration, not any relief was procured to the patient, but the pains laſted with equal vehemence; notwithſtanding this, the ether was continued, and at the fourteenth friction the patient felt himſelf a little better; the pains only remained at the hip, and the middle and outer part of the leg, and though they were ſtill very excruciating, the remedy was continued. At the 24th friction the pains in the hip entirely diſappeared, but in the leg a painful ſenſation ſtill exiſted, though the patient was able to walk with facility, and appetite and reſt were returned; the frictions are ſtill continued with the hope of baniſhing entirely the pain left in the leg. To theſe obſervations I could add many others, confirming the efficacy of that remedy. Some of my colleagues have likewiſe uſed it with ſimilar ſucceſs.

The above obſervations are an additional proof of what has been ſaid by Cit. Sedillot, of this remedy poſſeſſing the advantage of producing an agreeable heat on the ſkin, and a very uſeful perſpiration, without augmenting the irritation or erethiſm in thoſe parts. It ſeems particularly to ſatisfy the indication of opening the pores, and rendering the ſkin permeable for the rheumatic matter.——
(Recueil Periodique de la Société de Medicine de Paris, No. xliii.)

Obſervations on the Uſe of Alkalis againſt Accidents occaſioned by Lightning. By Cit. Gaultier Claubry.

The effects of lightning are ſometimes ſo ſingular, and vary ſo much in every reſpect, that it would be as tedious to undertake their hiſtory as ſuperfluous to attempt to explain them. The two following obſervations, however, will ſtate ſome facts which may perhaps

perhaps ſeem extraordinary, and deſerve attention: to one of which I have been witneſs, and of the other I was myſelf the ſubject.

Obſerv. 1. Chabot, a woman of the village of Groeſt, near Blois, being occupied in preparing lixivium, was ſtruck by a flaſh of lightning, which extended from the left clavicle in a ſtraight line to the inner ankle, and had cauſed all this way a wound, two lines deep and about three lines wide, in which ſhe at firſt felt a ſlight degree of heat, increaſing ſoon after ſo as to give much pain. One of her acquaintance, anxious to aſſiſt her, applied the firſt remedy which was neareſt at hand, and poured upon her body a conſiderable quantity of cold lixivium, which was made from the aſhes of freſh wood. When I was called, I obſerved in examining the wound, that all thoſe places which had been touched by the lye were of a browniſh colour, and little ſenſible; whereas thoſe parts where it had not touched, had a high red colour, and were riſen in bliſters, attended with violent heat and excruciating pains. Struck by this difference, I did not heſitate, after having opened thoſe puſtules, to cover the whole wound with linen dipped in lye, which was ordered to be repeated four times a day. The patient complaining of a taſte of *gas hydrogéne ſulfuré*, I preſcribed her about half a drachm of carbonate of pot-aſh, or fixed vegetable alkali in a pint of water, ſweetened with ſome ſyrup, and recommended her to drink freely. The following day a ſtrong ſmell of hepatic gas was perceived in the cloaths, and in the urine, which alſo ſhewed on its ſurface, having ſtood for ſome time, an oily matter of the thickneſs of two lines, and with which the cloaths were likewiſe covered. The ſixth day the wound began to dry, and on the tenth it was nearly healed; two purgatives terminated the cure, and the patient found herſelf quite recovered.

Obſerv. 2. The 16th of Floreal, returning on horſeback from the country in exceedingly hot weather, a very heavy ſtorm, attended with continual great flaſhes of lightning and thunder, overtook me on the way. The horſe ſuddenly fell down, and I felt that ſame moment a great heat on my face and hands, and perceived that the hairs of my eye-brows and beard were burnt, and likewiſe the mane of my horſe, which died three days after. The firſt twelve days after this accident, I felt nothing but ſome heat over my whole body, attended with a profuſe perſpiration; and as I happened to have a cold at the time, my expectoration went not only regularly on, but even with more facility. During this time I had a ſlight taſte of hepatic gas in my mouth, which ſmell was alſo perceived by thoſe who approached me. In this quiet ſtate I almoſt began to forget the accident; when, on the twelfth day, I was ſuddenly ſeized with violent convulſions in my arms, which laſted an hour, and at the ſame time I was attacked by a violent head-ach and great pains in the throat; the following night was very reſtleſs, the head-ach more violent, and I was nearly ſuffocated. I was immediately bled at the foot, which I repeated ſome hours after, and by that means the head-ach diminiſhed conſiderably, my reſpiration became more free, and I could ſwallow better; but the

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hepatic ſmell and taſte got almoſt intolerable. I ſlept a few hours during the night, and when I awoke I obſerved that my head and face began to ſwell, which increaſed every moment; beſides this general ſwelling, partial tumours roſe on my face as well as on my head, of which the ſmalleſt were of the ſize of a nut, and at the top of the largeſt, ſmaller ones appeared; they were all hard and red, and cauſed exceſſive heat and pains. My head, whoſe circumference in its natural ſtate is about twenty-two inches, had now almoſt increaſed to above fifty; in proportion as it was ſwelling, the head-ach diminiſhed, together with the pains in the throat; and when it had reached the higheſt degree, it was entirely gone. My head, however, diminiſhed by degrees, as it had begun to ſwell, and on the 10th day the epidermis ſeparated, which was finiſhed in a few days. My urine exhaled, like that of the woman, an inſupportable hepatic ſmell, and my abundant perſpirations had the ſame ſmell, which was ſo ſtrong, that it was almoſt impoſſible for any body to ſtand near me; when my urine had ſtood for a while, an oily cuticula, two lines thick, appeared upon it. The treatment I underwent was very ſimple; after being twice bled, I kept a moſt rigorous regimen; and the good effect I had obſerved from alkali induced me to uſe it likewiſe; I took therefore fifteen drops of ammonia, or alkali volatile fluor every ſix hours, and, indeed, at each doſe I perceived a conſiderable relief. We preſent theſe obſervations for the public, to decide more juſtly by further obſervations, what advantage may be derived from alkalis in curing accidents occaſioned by lightning. *(Ibid.)*

Extract of a Memoir on the Mildew, and the Acid contained therein; read at the Philomatic Society at Paris, by Cit. CHANTRAN.

CIT. CHANTRAN having remarked that the ſtalks bearing blighted ears do not differ from others; and that theſe ears are, at the ſame time, compoſed of good and bad grains, thinks it more likely that this diſeaſe of the corn does not pre-exiſt in the germ of the ſeeds, as has been commonly believed. By analyſing 46 grains of mildew, he found it to contain an acid eaſy to be extracted by thoſe means of the analyſis, which could not ſufficiently act upon it as to produce and form it. Boiling water infuſed with it, quickly reddens blue vegetable tinctures, whereas the reſiduum of this infuſion does not any more ſhow that character. The mildew, freed from its acid, and calcined, at the acceſs of air affords a ſmell like burned horn, and the reſiduum is ſix times more than that of the ſame quantity of meal treated in the ſame way. This, with microſcopical obſervations, ſeems, according to Cit. Chantran, to prove the animality of that ſubſtance, and to mark a greater difference from the meal of corn, than can be produced by a ſimple diſeaſe.

The acid of mildew is not volatile, and may be obtained concentrated by diſtillation. It forms with lime and ammonia an inſoluble

ſoluble ſalt. This laſt character diſtinguiſhes it from phoſphoric acid. Combined with potaſh, it affords a ſalt cryſtallized in ſmall needles, eaſily deliquating, and of a bitter taſte. The carbonate of lime is decompoſed by it.

Cit. Buniva has read a very intereſting Memoir, before the Society of Medicine at Paris, on the Epizootic Diſeaſe of Cats. Theſe animals are ſubject as well to chronic as to acute diſeaſes, epizootic (a word which anſwers to epidemic in man) malige. He deſcribes all the different ſymptoms which attended the acute diſeaſe, by which cats were lately attacked, and periſhed in great numbers, in Italy, France, and Germany; and of which the moſt remarkable is, that, after the ſecond day of the diſeaſe, they loſe the property of electric ſparkles being drawn from their back, a phenomenon very obſervable in their ſound ſtate; and likewiſe, thrown from any height, they fall no more on their feet, which they commonly do. The diſſection of the body ſhows gangrenous ſpots in the bowels, &c. Cit. Buniva then enters upon an enquiry into Dr. Mitchell's theory, who derived the origin of contagion from the nitrous oxydated gas, or nitrous dephlogiſticated air, of Prieſtly (ſepton Mitch.); but he found this opinion did not agree with ſeveral experiments he purpoſely made with Vauquelin. This epizootic of cats communicates, according to his obſervations, to cattle, and vice verſa. It is likewiſe obſerved, that ſuch epizootics are fore-runners of an epidemic, and on that account they deſerve the attention of medical men. *(Requeil Periodique, Vol. XLIV.)*

The Ruſſian Count Mussin-Pushkin has ſucceeded in rendering the metal of platina cryſtallizable, by treating it according to Richter's method, with vitriolated tartar or ſulphat of pot-aſh, and reducing it by means of common ſalt, inſtead of natron. This experiment, however, muſt be made with the greateſt exactneſs, and the fire ought not to be ſtronger than juſt to produce an uniform and ſhining cuticula in the middle of the crucible, becauſe if the fire is too vehement, the metallic particles will go to the bottom of the veſſel in ſmall maſſes, in form of trees, and the cryſtallization in vain be expected. The cryſtals cover the inferior page of the above cuticula in the ſhape of ſmall rhomboid priſms, plates, &c. and have at the firſt ſight, the appearance of the fineſt cryſtals of antimony. The Count gives a ſatisfactory explanation of this proceſs of cryſtallization.——A ſolution of platina in aqua regia, conſiſting of four parts of common ſalt, and five parts of nitrous acid diluted with three parts of water, made in the ſand bath, affords, when the retort is become cool, and two or three parts of the fluid are gone into the receiver, three ſorts of ſalt, cubic nitre, common ſalt faintly tainted with platina, and a new ſalt in form of quadrangular plates, lying in ſtrata one upon another, of a beautiful dark red colour, which particularly diſtinguiſhes itſelf by its eaſy ſolubility from all other ſalts of that metal. It has a gentle aſtringent taſte, and ſuffers eaſy reduction before the tube; but is afterwards not attracted by the loadſtone, nor malleable, except

when treated with nitric acid. It is probable, that on account of the quantity of water of cryſtallization which it contains, a greater coheſion of the particles of this metal is produced, than in any other ſalt of platina; a circumſtance, which will probably contribute much to its being with leſs difficulty worked by the hammer, particularly if the metal, after being reduced from the ſalt, is treated with nitric acid. *(Vide Crell's Chemical Annals, in German, No. 2, 1800.)*

The ſame gentleman relates ſome experiments reſpecting the decompoſition of red lead in nitric acid; according to which, this acid ſeems to have a conſiderable effect upon it, contrary to the experiments of Vauquelin. A ſolution of the red lead in that acid is produced in the ſand bath, which, after being ſome time expoſed to the action of light, lets fall cryſtals of a dark red colour, receiving by degrees a metallic appearance. If any acid is poured upon them, a part remains almoſt unaltered, while another forms a precipitation of a yellow colour; and a part of the chromium contained in the red lead ſeems by this to be changed into a calx.—It is likewiſe remarked, that the chromiate of ſilver is decompounded by muriatic acid; but the acid of chromium is with the greateſt difficulty changed into the ſtate of a metallic calx. After a part of the chromium calx is precipitated from the green ſolution of the chromiate of ſilver by alkalis, it produces, by being filtered, a yellowiſh colour; and metallic ſolutions in mineral acids, decompounded by it, afford always chromiates of metals.—The chromiate of iron, an ore which is found in Siberia, and which reſiſts the action of cauſtic alkali as well as nitre in the dry way, is, according to the experiments of the ſame gentleman, eaſily decompounded by detonating it with nitre; a proceſs, he thinks, by which metals moſt obſtinate to analyſe may be decompounded. *(Ibid. No. 3.)*

Prof. Tromsdorf, of Erfurt, has analiyed the blue chalcedony from Siberia, in which, however, he could not trace any metallic particles by repeated experiments, though it ſeemed obvious, from its dark colour, to contain them. The reſult of his experiments was, that it conſiſted of nothing but the pureſt ſiliceous earth; a circumſtance ſo much more remarkable, as other ſpecies of chalcedony have never been found, only pure ſiliceous earths, which appears from the experiments of different chemiſts; viz. Mr. *Bindheim, (Tranſactions of the Society of Friends of Natural Hiſtory, Vol. iii. p. 429, in German,)* found in the common chalcedony ſiliceous, aluminous, and calcareous earths, and iron; Mr. *Bergman (in his Opuscul. Chem. Vol. ii. p. 60)*; and Mr. *Fuchs (in Leny's Mineralogical Compendium, p. 47, in German)*, beſides ſiliceous earth, aluminous and calcareous earths, and the calces of copper and iron. The blue colour of that foſſil ſeems therefore to depend on a particular ſtate of aggregation in its particles, by which a particular refraction is cauſed. Thus nature forms, in a way inconceivable to us,

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from the ſame ſubſtance, ſiliceous earth, the blue chalcedony, the noble opal, the clear and tranſparent rock cryſtal, and the opaque flint ſtone. (*Ibid. No.* 3.)

Mr. Lowitz, of Peterſburgh, in the ſame Journal, has given a memoir on the nature of the common kali, imperfectly ſaturated with carbonic acid. It is known that we obtain the common kali by the combuſtion and calcination of vegetable bodies in a ſtate but imperfectly ſaturated with carbonic acid. This has hitherto been thought to be merely accidental, in the ſame manner as if, in the artificial compoſition of any neutral ſalt, either of its conſtituent parts is added in too great a proportion; which proceſs is diſtinguiſhed by the name of ſuperſaturation. Now, it may be conſidered either as mechanical or chemical; in the firſt caſe it is accidental, and the ſuper-abundant particle, whether an acid or alkali, eaſily and perfectly ſeparates by cryſtallization, during the drying of the cryſtals, and by alkohol, if the neutral ſalt is inſoluble in it. On the contrary, in the chemical ſuperſaturation, the ſeparation of the ſuper-abundant particle is by no means effected in this way, but a proper combination of a ſalt is formed, poſſeſſing properties different from thoſe, which are obvious in it when it is perfectly and equally ſaturated. The borax, ſublimate, &c. are inſtances of the kind. By different experiments relating to the above obſervation, the common alkali has proved to be alſo a ſalt, which, like borax, is chemically ſuperſaturated with its alkaline baſis. (*Ibid.*)

The ſame chemiſt attributes the purifying property of the charcoal to a chemical action, though it has been conſidered, by the moſt celebrated chemiſts, merely to act mechanically in rendering different fluids pure and clear. But if this only depended on its porous and ſpongy quality, it would not be poſſible for it to have any effect by being reduced to a powder; of which, however, experience ſhows the contrary, as it appears more efficacious the finer it is pulveriſed; and it keeps that property, even when by wetting it with water its poroſity is entirely deſtroyed. If the diſcolouring of any fluid by the powder of charcoal, depended merely upon its mechanically imbibing the colouring particles, it would be practicable to make them again appear by a proper treatment, after having ſeparated the powder from the diſcoloured fluid. But this is by no means to be effected; likewiſe the ſmell, or oily particles which have been taken from any fluid by coals, would be perceived in them afterwards, which is never obſerved. The powder of the charcoal, beſides, is able to diſcolour a chemical ſolution of colouring matter in water or ſpirits; and this muſt therefore probably be effected chemically. It appears by this, that the powder of charcoal enters into a chemical combination with thoſe particles, from which its addition frees different fluids. The chemical affinity of them ſeems ſtill more evident by the following experiment. One or two drachms of the powder of charcoal be-

ing, by washing, perfectly freed from any adhering alkaline particles, are boiled in a considerable quantity of water till all the air contained in its pores is expelled, and itself sinks to the bottom from its greater specific gravity. Having distributed this into four different glasses, and added to the first a portion of any gross oil; to the second, some vitriolic ether; to the third, alkohol, all of which are lighter than water, the powder of the charcoal combines itself with these substances, and swims with them upon the surface of the water; but if the essential oil of cloves (oleum caryophyllorum) or any other ponderous oil, is put into the fourth glass, the powder of the charcoal will sink with it to the bottom, and the water become quite clear; all which facts are difficult to be explained in a mechanical manner; it can only be allowed, that the powder of charcoal purifies turbid fluids by a mechanic action. *(Ibid. No. 3.)*

Mr. LICHTENBERG, of Berlin, has found by his experiments, that a method of purifying nitric acid from sulphuric and muriatic acid by means of lead, as proposed by Vaquelin, did not answer the purpose. Sulphuric acid and nitric acid, which contained muriatic acid, were poured into a retort, in which a proportionable quantity of litharge of silver had been previously placed. Having distilled the acid, it was found to be still more impregnated with muriatic acid than before; the residuum in the retort consisted chiefly of nitrate of lead and a small quantity of sulphat of lead. The nitric acid is, indeed, freed by this method from sulphuric acid, but by no means from the muriatic acid. A more certain method of purifying nitric acid seems to be the following; namely, to dissolve the nitre in water previously to the distillation of the acid, and to purify it by the addition of the nitrate of silver, after which the nitre must be again crystallized before it is employed in the distillation.

Prof. HERMBSTAEDT has made several chemical experiments with the leaves and roots of the tulip tree, (Liriodendron tulipifera, L.) recommended as an useful bitter. The leaves of this tree, which possess somewhat of a sharp and bitter taste, were squeezed in a stone mortar, and the juice expressed; from which, after six hours, a glutinous matter of a green colour separated, coagulating by alkohol in the temperature of boiling water, and burning with the smell of horn, which, consequently, was occasioned by its vegetable albuminous matter. The juice being filtered and mixed with alkohol, still produced a portion of albuminous matter; the rest of it, treated accordingly, contained a great deal of saponaceous principle, some gum, a little resin, and likewise an astringent quality. Another portion of the juice, after being freed from albuminous matter by being twice boiled, was thickened to an extract of a very bitter taste. A similar extract was obtained from the juice of leaves which were repeatedly boiled in water. Alkohol, digested with the leaves, extracts a tincture containing

containing ſcarcely any thing but ſaponaceous matter. The rinds of the younger roots have a ſmell and taſte much like Canella Alba; and this aromatic matter is extracted by alkohol, together with ſome reſin and eſſential oil.

We are in poſſeſſion of a Memoir of the ſame able Chemiſt, on the chemical analyſis of animal bodies, ſimilar to what has been publiſhed by him on the vegetable productions, which we ſhall take an early opportunity of communicating to our readers.

We find the uſe of the Semina Phellandrii Aquatici, L. which have been mentioned in this Journal as a remedy in pulmonary conſumptions, likewiſe recommended by a phyſician in Saxony in old ſore legs; and a caſe is related, where a patient who had had ſore legs many years, and which reſiſted all kinds of treatment, was at length cured in the courſe of ſeven weeks by Semina Phellandrii Aquatici, given in the doſe of one ounce per day.

Mr. Hirsh, a German dentiſt, recommends in the tooth-ach, grubs of Cynips Roſae, an inſect which cauſes the excreſcences found on wild roſe buſhes, and known under the name of Spongia Cynoſbatos, or Fungus Bedeguar, in which thoſe little worms are met with. They are to be ſqueezed between the fingers, and the affected tooth or gums repeatedly rubbed with them; when the tooth-ach ceaſes, or, at leaſt, is much diminiſhed. *(Hufeland's Practical Journal.)*

Brugnatelli propoſes a new arrangement of mineral waters, by dividing them into four claſſes:

1. Saline mineral waters, mineraliſed by terreous, alkaline, or metallic ſalts.
2. Saline acidulated mineral waters, which contain a free acid beſides the ſalts.
3. Saline ſulphureous mineral waters, in which, beſides the ſalts, ſulphur and ſimilar parts are met with.
4. Sulphureous mineral waters, which contain ſulphur in different proportions and ſtates, but never any ſalt. *(Annali di Chemica et Storia Naturale, Tom. XVII.* 1798, No. 101.*)*

The ſame chemiſt conſiders the formation of ethers as an oxygenation, or, as he calls it, thermoxygenation, of alkohol with an oxyd gas, gas oxyde. *(Ibid.)*

The Obſidian, a volcanic foſſil of Iceland, has been lately analyſed by Prof. Tromſdorf, of Erfurt, and found to contain 63, ſilaceous earth, 20,5 aluminous, and 13,5 oxyd of iron. A black feldſpar, found in the Baſalt, contains, according to the ſame, 66,5 aluminous earth, 15,0 ſilaceous, 6,5 oxyd of iron, and 9,0 oxyd of manganeſe. *(Annales de Chemie, No.* 101.*)*

Prof.

Prof. Arneman, on Acoustic Tubes.

[With an Engraving.]

The uſe of acouſtic tubes, (hearing trumpets) depends on two points; 1. That the ſound is put into a ſtronger vibrating motion through the medium of the metal, and at the ſame time; 2. That a reſonance, and new reflection of the ſound, is produced.

The ſound increaſes and becomes ſtronger by theſe inſtruments, but if they are not properly conſtructed, it is likewiſe made leſs diſtinguiſhable. The beſt acouſtic tubes are the moſt ſimple ones, either quite ſtraight, or with a little curvity. It is alſo eſſential, they ſhould have a wide opening to receive a greater portion of ſound, and by which it is brought at the ſame time more condenſed to the organs of hearing. Thoſe that are much curved, have no great effect, and likewiſe the inconvenience that on account of their curved line they cannot be worked ſo even by the artiſt. The ſame may be ſaid of the conoidical tubes, in which the ſound ceaſes to be reflected at the place where the angle grows greater than a right one, and becomes retrograde; becauſe, according to Lambert's Obſervations, (on Acouſtic Inſtruments, in German) the angles of reflection increaſe like unequal numbers; and the laſt which can be admitted, muſt not exceed 90°. The form of an entire cone, is therefore by no means calculated for propagating the ſound, which, having entered, goes out again, without reaching the top of the cone. The parabolic form is the fitteſt for the conſtruction of acouſtic tubes, into which the ſound enters in a direction parallel with the axis, and is by reflection concentrated as it were in a focus. Acouſtic inſtruments with an hemiſphere to them, are inferior to theſe, becauſe the ſound is only reflected from the centre, and at the ſame time not ſo eaſily intercepted.

However, it ſeems that the conſtruction of theſe inſtruments has not been brought to ſo great a perfection, as not to admit ſome improvements founded upon practice and experience. For the purpoſe of promoting this, Mr. Arneman intends to give, by degrees, figures and deſcriptions of thoſe that have proved moſt uſeful by experience, and he invites all practitioners in Germany, who have had an opportunity of making obſervations to this ſubject, to communicate any inſtrument of the kind they have applied with ſucceſs, by which means much would be contributed to a more perfect and ſure method of diminiſhing thoſe inconveniences ariſing from difficult hearing, for which ſo many ſeek advice and relief in vain, againſt an evil, which makes men unfit for enjoying life from the moſt intereſting mean, that of communicating and receiving ideas by word of mouth. The public would, we truſt, be likewiſe much obliged to the Editors of this Journal, if they could perſuade the practitioners of this country, to impart their experience on this ſubject here, and to contribute to ſuch an uſeful and humane undertaking. As they hope not to fail in their requeſts,

requeſts, they ſhould with pleaſure receive any communication reſpecting the ſubject.

The inventor of the preſent inſtrument (ſee the Plate) is not known, but it belongs certainly to the beſt of the kind that we know of. It is made of thin braſs or copper, and ſhould not weigh more than eight ounces, whereby it becomes very portable, and may as well ſerve for the right as for the left ear. To enable any artiſt to make this inſtrument accurately, it has been thought proper to add the dimenſions of the different parts of which it is compoſed. H G I F is the cup, of which H I has 3 Paris inches, 6 lines in diameter. F G = 2 Paris inches, 10 lines. H F is = 3 Paris inches, 1 line. F G is the bottom of the cup, which muſt particularly be made with exactneſs, becauſe the uſe of the inſtrument depends in a great meaſure on its conſtruction. It may be made as the ſegment of a circle whoſe radius is = 2 inches, 7 lines, Paris; but it is ſtill better to give a parabolic form to the ſegment, whoſe focus is 1 inch Paris. For this purpoſe it is neceſſary to work after a certain model or ſtandard, of which Fig. II. gives an idea, after which the bottom muſt be accurately made. The inſide ought to be ſmooth and well poliſhed, the whole afterwards ſoldered on, when the inſtrument is put together. The others are, that which receives the ſound, D E, and the conducting tube, which carries it to the ear, K L B. The former is to be performed in the ſame parabolic form as the bottom of the cup, and muſt therefore be exactly worked after the above Fig. 2, except that its chord is by 4 or 5 Paris inches ſmaller than the bottom. In the middle of this part, D E, a hole is made, whoſe diameter is 1 Paris inch 2 $\frac{1}{2}$ lines, which is at the ſame time the lower diameter of the tube K L, its upper diameter in A being only 6 lines. The length of the tube from K L to A, is 5 inches 10 lines. This muſt now be bent in ſuch a manner, that K L and A make an angle of 90°. Being well poliſhed inſide, the part D E is ſoldered into it, and the whole conducting tube faſtened to the cup in I L, ſo that D E is equally diſtant from all ſides of the cup in an exact horizontal direction, and the focus of the part D E likewiſe ſufficiently diſtant from the focus of the bottom. In A another piece of tube is put on, of 9 inches in length, and faſtened to it by means of a ring on the former A, at the diſtance of 1 inch from its end, with an opening in its periphery, through which a hook may paſs, and turning this afterwards, the tube becomes one contiguous piece. On the curvation in B, a top of bone, ivory, or horn is put, to prevent the ear being irritated and inflamed, which may otherwiſe be cauſed by the metal. The laſt part is the cover, H I, perforated with holes, of which Fig. III. ſhows the profile. The part A B being taken off, the inſtrument may be conveniently carried in the pocket. It can alſo be faſtened to the body by ribbands, by means of two clinchers in M N, and thus even uſed in going a ſhooting, &c. *(Arneman's Magazine, Vol. ii. No. 3.)*

Hints

Hints for Improvements.

Phyſicians in all ages have ſaid, that in epilepſy the brain, or a particular ſtate of the nerves, tranſmitted this affection to other parts, and were the primary ſeats of theſe diſorders; and, in fact, this has been demonſtrated from pathological phenomena, by ſeveral anatomiſts and obſervers. Thoſe epilepſies which have their ſeat immediately in the brain, have been found the moſt difficult to cure, but thoſe which have ariſen in the trunk or extremities, have been more eaſily removed. For theſe latter ſpecies, Monſ. Portal, an eminent and reſpectable practitioner in Paris, is of opinion that topical applications produce very beneficial effects, and mentions ſeveral caſes which he had cured, by rubbing the part affected with the *Oleum Animale de Dippel, (Ol. Cornu Cervi rectificat.)* after having uſed the whole tribe of nervous medicines, with bark, zinc, opium, and bliſters, in vain. In another caſe, where a convulſive epileptic affection was attended with conſiderable pain in the right foot, which had been much injured by a fall; both the pain and the epilepſy were ſpeedily removed by rubbing the part with a ſolution of opium in the *Ol. Animale de Dippel.* — This application might be tried in locked jaws.

An Eſſay on Medical and Chirurgical Education, by Mr. PARKINSON, of Hoxton Square, Author of the Chemical Pocket Book, Medical Admonitions, &c. we underſtand is in the preſs, and will be publiſhed at the meeting of the Claſſes of the different Lectures, to be entitled THE PUPIL, and is propoſed to contain, 1. Remarks on the qualifications required for thoſe intended for Medical Students; 2. A mode of education propoſed inſtead of that by apprenticeſhip; 3. Hints addreſſed to Hoſpital Pupils; 4. Advice to young men in their firſt eſtabliſhment in the Profeſſion.

To CORRESPONDENTS.

The Communications which have been received, ſhall be noticed as ſoon as poſſible.

The Editors will thank Mr. Samuel Thomas for his address.

Several of our Correſpondents have favoured us with Reviews of Medical Works, and for which we ſhould have been much obliged to them, if we profeſſed to criticiſe books; but it will be obvious, that Editors, who give their names to the Public, cannot enter the lists of criticiſm. It is the deſign of our Retroſpect of Books, to put it in the power of our Readers to judge for themſelves; and therefore we endeavour to give the Authors of Medical Works an opportunity of being heard in their own cauſe, by ſelections from the works themſelves.

ERRATA.

Vol. IV. p. 208, l. 16, for *cretacea*, read *cretaceæ*.
210, l. 16, for *nitrorsi*, read *nitrosi*; and for *eadem*, read *eandem*.
240, l. 12 for *excluded from*, read *exposed to*.
—— l. 2, Note, dele *morbid or*.
246, l. 5, for *mixture*, read tincture.

THE

Medical and Phyſical Journal.

VOL. IV.] NOVEMBER, 1800. [NO. XXI.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

I Shall feel myſelf obliged to you to inſert the incloſed letter to Dr. JENNER in your intereſting publication, the Medical and Phyſical Journal. I am,

GENTLEMEN,

Your obedient ſervant,

Oxford, Oct. 16, 1800. CHRIST. PEGGE.

To DR. JENNER.

DEAR SIR,

I have the honour of tranſmitting to you a ſeries of facts reſpecting the Cow-Pox, which appear to me to be very intereſting; and I flatter myſelf will be the more ſo to you, as they tend to eſtabliſh your own opinion as to the origin of that diſeaſe.

They have been communicated to me as they aroſe by a friend of mine, Mr. Lupton of Thame, a ſurgeon of long experience, and I do not heſitate to add, a man of the greateſt reſpectability in every point of view.

The attention of Mr. Lupton was firſt drawn to the preſent ſubject in March laſt, when the ſon of Mr. Way, farmer, of Ichford, applied to him on account of a complaint in his hand, attended with ulcerations very much reſembling the Cow-Pox. There was evidently a very great derangement of the ſyſtem, and the ſymptoms plainly indicated an abſorption of morbid matter, as the caſe was alſo attended with conſiderable ſwelling of the hand and arm, an enlargement of the axillary glands, rigors, pain in the hand and back, together with a greatly increaſed quickneſs of the circulation.

He could only account for theſe complaints from his having waſhed the ulcerated heels of a horſe, having had no previous communication with the cows.

Theſe circumſtances led Mr. Lupton to conceive that there might be a diſeaſe incident to the horſe analagous to the Cow-Pox, and communicable to the cow; and upon repeated enquiry he was ſatisfied that it was not the common greaſe to which horſes are liable, that had produced the above effects.

Mr. Lupton was ſo good as to communicate this information to me at the time, treating it as a matter of curioſity, rather than of ſerious inveſtigation, and I heard no more from him on this ſubject till the 8th of April, when I received the following letter, which I give you in his own words.

DEAR SIR,

Since my laſt letter reſpecting Mr. Way's ſon, I have had another caſe of infection, communicated to the human ſubject, owing to matter abſorbed from the ulcerated heels of a horſe. The perſon is Richard Hunt, a ſervant of Mr. Randolph, of Thame Park Farm, whoſe firſt ſymptoms were ſtiffneſs and uneaſineſs of the arm, ſwelling of the axillary glands, ſucceeded by puſtules on the hand, and a very painful ſuppuration of the middle finger, which had that blue appearance deſcribed by Dr. Jenner, as indicating the true vaccine diſeaſe; theſe were accompanied with rigors frequently recurring, attended with great heat, anxiety, giddineſs, pain in the head and back, ſickneſs, and vomiting.

Such were the appearances when I firſt ſaw him, which was on Sunday, March 30. On the 31ſt, he had a very bad night, and had been ſlightly delirious, the other arm growing ſtiff and painful. April 1ſt, was much better in every reſpect, except the painful ſtate of the finger, and the inflammation of the hand and arm: the courſe of the lymphatics were at this time beautifully marked with ſtreaks of a vivid red colour extending from the wriſt to the axilla. April 2d, continued better. April 3d, had a bad night from the pain of the finger; a puncture was now made, and about two tea-ſpoons full of a dark brown coloured fluid were diſcharged. April 4th, the cuticle was now removed, and diſcovered a ſhining red ulcerated ſurface, in the middle of which was a ſpot of a ſloughy appearance, of the ſize of a ſilver penny; this was covered with the red nitrate of quickſilver: the inflammation, pain, and ſwelling of the hand and arm were now conſiderably abated, and in other reſpects he was much relieved. April 6th, the finger much better; the puſtules of the hand had a dark coloured depreſſion in the centre, ſurrounded with an elevated margin of matter. From this time he had no complaint. It muſt be particularly remarked that this man has not milked any cow ſince laſt Michaelmas.

Thame, April 8, 1800.

On

On the 9th of April, a ſecond ſervant of Mr. Randolph, John Watſon, applied to Mr. Lupton, with ſymptoms ſimilar to thoſe of Richard Hunt, in conſequence of having aſſiſted him in dreſſing the heels of the horſe; Watſon's office and employment in the farm at this time was that of milking the cows.

Previous, however, to the appearance of ulceration upon the man's hands, the cows had been infected more than a week, and there can be no doubt but that the cows had received their infection from the horſe, through the medium of this ſervant. Whether the hands of this man were ulcerated from the immediate effect of the matter received from the heels of the horſe, as on that occaſion he was aſſiſtant only; or immediately from its modification in the teats of the cow, may admit of doubt. But from the fulleſt inveſtigation, I am perſuaded there can be no doubt as to the fact of the matter having been conveyed from the horſe's heels to the cows by this laſt mentioned ſervant.

Such was the progreſs of this hiſtory previous to the 18th of May, when happening to be at Thame, Mr. Lupton informed me that a third ſervant of Mr. Randolph (Leonard Paling) was affected in a manner ſimilar to that in which the two former had been attacked. In conſequence of this I had the curioſity to ſend for him; and on examination we were thoroughly convinced that he had received the infection ſolely from the cows, as he had never aſſiſted in dreſſing the heels of the horſe.

I found the appearances on his hand exactly correſponding with thoſe already deſcribed; I obſerved one of the axillary glands ſtill enlarged and very tender; and from his own ſtatement his whole ſyſtem had been very much diſturbed, evidently the effect of the ulceration on his hand.

Thus, dear ſir, we have ſeen a complete ſeries of facts relative to the progreſs of this very important diſeaſe as affecting the human frame, eſtabliſhing its origin in a diſorder of the horſe's heels, by farriers termed a ſcratchy heel, and conſidered as widely different from common greaſe.

The firſt ſervant was infected from the horſe, having never milked the cows; the ſecond carried the infection from the horſe to the cows; and the third received it ſolely from the cows.

I have only to add that from the laſt ſervant, Leonard Paling, Mr. Lupton inoculated ſeveral children.

Some of theſe I ſaw on the 8th day after inoculation, with the moſt decided appearance of true Cow-Pox upon them. This appearance, I could not miſtake after having witneſſed ſo many inſtances of it at our friend's, Mr. Fermor of Tuſmore, whoſe

benevolent and diſintereſted exertions have contributed ſo largely to the ſtock of facts in ſupport of a diſcovery, which, if the powerful argument of induction may be allowed, bids fair to be of the greateſt benefit to mankind. It is proper to add, that in all theſe children the diſeaſe terminated as uſual, favourably.

One circumſtance was remarkable in all the three ſervants above mentioned, viz. that before any abſolute ulceration or even ſenſation of pain took place on their hands, they had been previouſly affected by ſwellings in the axilla, and other ſymptoms denoting conſtitutional diſeaſe; and the ſecond ſervant (Watſon) aſſured me repeatedly, that though both his hands had been ulcerated, a ſwelling firſt appeared in the axilla of the left arm, was followed by ſickneſs, head-ache, &c. &c.; after which the ulceration commenced in the palm of the right hand between the fore finger and thumb.

As not one of the perſons above mentioned have had the Small-Pox, it is Mr. Lupton's intention to inoculate them as ſoon as he can find a ſuitable opportunity; and when that occurs you ſhall be informed of the reſult. I have the honour to be,

DEAR SIR,

Your very ſincere humble ſervant,

Oxford, Oct. 3, 1800. CHRIST. PEGGE.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

I Have read with conſiderable pleaſure, in a former Number of your extenſively uſeful Journal, a paper by Dr. Magennis, on his treatment of dropſical caſes*. His preliminary obſervations on the accuſtomed plan of treating that diſeaſe appeared to me ſo well founded, his arguments in favour of a different one ſo concluſive, and the mode he has adopted ſo well calculated to inſure ſucceſs, that I was fully reſolved to try its efficacy in the firſt caſe that occurred of the dropſical kind, and which happened in a very ſhort time after I had read the account; the reſult of which I beg leave to communicate.

I was called to attend an aged lady, about 70, who had laboured under an Hydro-thorax for ſome months; ſhe had a ſmall but quick and very irregular pulſe, great palpitation on taking

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* Vol. IV. page 212.

the leaſt exerciſe, and was incapable of remaining in the horizontal poſture at nigh about two hours; when ſhe was ſuddenly ſeized by a ſenſe of ſuffocation, and was conſtrained to riſe and ſit in her chair to paſs away the remaining dreary hours; her breath was exceedingly ſhort, her appetite very much impaired, and her whole frame in an emaciated ſtate. She had been under the uſual mode of treatment for ſome time, but with very little ſucceſs; indeed, from her advanced period in life, and the particular nature of that ſpecies of dropſy, the caſe wore a very unpromiſing aſpect, as it ſcarcely needs be obſerved how ſeldom that diſeaſe yields to the moſt rational treatment, and under the moſt favourable appearances.

I began to exhibit the medicine much in the ſame form and doſe as Dr. M mentions in his own practice, only ſubſtituting the *ammon. pp.* for the *fixed alkali*, and the *miſt. camph.* as the baſis inſtead of the *aq. menth. ſat.* which I thought more congenial to my patient's conſtitution.

On calling the following day I was much pleaſed to find, that after having taken a doſe of the medicine every ſix hours, it had perfectly agreed with the ſtomach, and ſome little increaſe had been obtained as to the quantity of urine voided; this I thought a favourable ſymptom, and I was encouraged to perſevere in the uſe of the ſame medicines with a very ſmall augmentation of their doſes; and as I expected that the principal relief was to be obtained by a determination to the kidneys producing a copious flow of urine, I deſired the nurſe to be very particular in aſcertaining the quantity of water evacuated every day, and likewiſe that of liquids taken into the ſyſtem in the ſame given time. I found upon enquiring into theſe two circumſtances the following day, that about *four pints* of urine had been evacuated, and not above a *pint* of liquids drank; and had the happineſs of finding my patient materially relieved. She had been able the preceding night to lie in bed, and obtained ſome reſt; her breath was conſiderably liberated, the palpitation very much decreaſed, and the anaſarcous ſwellings of the legs (which I had omitted to mention in the firſt account of her caſe) greatly diminiſhed. Having every encouragement to proceed, I perſiſted in the uſe of the remedies without any alteration, excepting a very inconſiderable addition to the quantities of the active ingredients, and found for the two or three following days nearly the ſame evacuation as to urine, bearing a ſimilar proportion to the liquids taken as mentioned above. It appeared to me now, from the abſence of the ſymptoms attendant on Hydro-thorax, that the diſeaſe was ſubdued, and the water collected in the cheſt drained away; for the breathing was uninterrupted, and the palpitation entirely ceaſed; therefore

therefore I thought it unneceſſary to perſiſt in the *diuretic plan* any longer. But notwithſtanding the diſeaſe itſelf was removed, I knew there was conſiderable debility left; and to obviate which, to fortify the ſyſtem by a courſe of powerful tonics, appeared to me the moſt effectual means of ſecuring the patient againſt a relapſe; conſequently, I ordered her the *decoct. cinchonæ* joined with *zinc. vitr.* &c. three or four times a day with the happieſt effects; for, in two or three weeks afterwards her appetite was quite reſtored, her general ſtrength recovered; and at this preſent time ſhe enjoys a ſtate of general good health, to which for many months before ſhe was an utter ſtranger.

Thus have I briefly ſtated a ſucceſsful caſe, the communication of which I could not with propriety withhold from public peruſal, hoping it may conduce to general utility in the treatment of a diſeaſe which has often baffled the ſkill of the moſt ſagacious in the profeſſion; and ſhould the inſertion of it tend to this ſalutary purpoſe, the writer will be highly gratified in having an opportunity of caſting in his mite to the treaſury of the public good. I am,

GENTLEMEN,

Your's, reſpectfully,

H. DAVIES.

Piccadilly,
October 14, 1800.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

PLEASE to inſert the incloſed copy of Dr. Marſhall's letter in the next Number of your Journal. I am,

GENTLEMEN,

Your's, &c.

JOHN RING.

New-Street, Hanover-Square,
October 16, 1800.

Copy of a Letter from Dr. Marſhall to Mr. Ring, dated Gibraltar, Auguſt 23, 1800.

MY DEAR SIR,

I make no doubt of the ſatisfaction you will feel when I inform you of the very polite reception and great attention we have met with from the Governor-General O'Hara, who intereſts himſelf much in the ſucceſs of that great diſcovery of which

which we are the miſſionaries; and ſet the example to the garriſon by having his own infant inoculated. We have ſince inoculated the ſoldiers of the garriſon and their children, who have not had the Small-pox, and to-morrow we expect to ſail for Minorca, with recommendations to inoculate the Engliſh army now lying there.

From the medical men here, we have met with the moſt liberal and polite attention; and I am further happy to add, that all are equally convinced of the efficacy of the Cow-pox in reſiſting the Small-pox, and of the great reward due to our friend, Dr. Jenner, for the benefit he has conferred upon ſociety and the world at large, by his inveſtigation of this ſo peculiarly mild and ſafe diſeaſe.

In this warm, and in compariſon with England, hot climate, we have not obſerved any diſſimilarity of ſymptoms in the progreſs of the diſeaſe from what is uſual in England.

The Governor has applied to the court of Madrid, to obtain liberty for us to go there to inoculate; and it is probable, that upon our return to England, we may ſtop there a ſhort time. Some of the matter we uſed for inoculation here, was what you obligingly furniſhed me with; and we find it perfectly efficacious, although no precaution had been uſed as to the preſerving it more than putting it into a ſmall phial.

I ſhall from Minorca ſend you the reſult of our inoculation, though I have no doubt of its proving as ſucceſsful as it has done here.

Dr. Walker begs to preſent with me our joint reſpects and good wiſhes. Believe me ever

Your obliged friend,

J. H. MARSHALL.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IT afforded me no ſmall degree of ſatisfaction to obſerve in your Fourteenth Number, Mr. Carliſle's Remarks on the Uſe of Cauſtic, ſeveral of which appear to me to be pertinent and judicious; his motives every one muſt approve.

Induced by the ſame ſentiments, I beg leave to contribute my mite through the channel of your uſeful Journal.

Mr. Home, in his Treatiſe on Strictures, ſpeaking of the Urethra, obſerves, that "When the urine paſſes, the canal is large;

large; when the ſemen is thrown out it is ſmall, the membrane having a power of adapting itſelf to theſe two different ſtates; and this power of action within itſelf is ſimilar to muſcular contraction and relaxation."

Does this action in the canal of the urethra take place in reality? I apprehend not; and the matter may be explained in another way.

In the emiſſion of ſemen, the penis is commonly erected; a greater quantity of blood than uſual is at this time lodged in the cells of the corpora cavernoſa penis, which *compreſſes* the ſides of the urethra; that this happens I infer from the difficulty that occurs during erection to void urine, which paſſes then in a ſmall divided ſtream.

We judge of a ſtricture in the urethra by the difficulty the patient complains of in making water; by his frequent deſire to void it, in doing which it is attended with pain, and comes away in ſmall quantities, either in drops or in a narrow contracted ſtream; and laſtly, by examination with a bougie or catheter.

A diſcharge from the urethra, ſimilar to a gleet, is I preſume not an unfrequent attendant on ſtricture; and extraneous ſubſtances, ſuch as ſtones, are ſometimes found in the paſſage, which, however, are readily diſtinguiſhed by the touch on introducing the ſound.

With reſpect to the proximate cauſe, we learn from Mr. Home, who has examined the diſeaſe by diſſection after death, that there is a doubling of the membrane and narrowing of the urethra in particular parts, which when the contraction is increaſed, becomes a ridge projecting into the canal, behind which ulceration is ſometimes obſerved.

In the treatment of ſtrictures, without having recourſe to the knife, two methods have been adopted; the one is by the introduction of bougies, and the other by the application of cauſtic.

In the former, the bougies act by their mechanical preſſure, and thus dilate the canal of the urethra; this dilatation is however merely temporary, and I have known gentlemen uſe bougies for years without the ſtricture being removed. The other mode of treatment, viz. the application of cauſtic, was recommended and practiſed by the late Mr. Hunter; ſince his death, it has been greatly improved by Mr. Home, whoſe knowledge and great experience in the treatment of ſtrictures every one will allow.

This practice of applying cauſtic to ſtrictures of the urethra is ſtill in its infancy, and it becomes an object of importance to know whether or not it anſwers the end propoſed; at the ſame time

time I beg leave to say that it has astonished me to observe gentlemen condemn the practice without giving it a trial.

Mr. Carlisle has mentioned a case where the caustic was used, and followed by a profuse hæmorrhage.

It would be reflecting on his practice, to suppose in the case he alludes to, the caustic had been too long or too extensively applied, by which a high degree of inflammation might have been induced, and thus have occasioned the hæmorrhage. The particulars of the case I know not; but in a case of highly inflamed phymosis, I have known the application of half a dozen of leeches to the prepuce followed by a profuse bleeding, which was, however, attended with the best effects.

Before using the caustic, it is necessary to ascertain the disease, with its situation; and this we do by means of a bougie, made either of polished leather or the elastic gum; the latter is preferable, as it is not so hard, and is sufficiently elastic. On introducing it into the urethra, we are not to imagine, that in every stoppage we meet with, there is a stricture, because the point of the bougie may have plunged into one of the lacunæ; add to this, the effect induced by irritation. We are to pause some little time, then to turn round the bougie, and raising the point by lowering the other end, we try to push it gently on.

Let us next suppose that we meet with an obstruction, and that the caput gallinaginis (which is commonly situated in an adult little more than eight inches from the external orifice of the urethra) is out of the question, we are now to withdraw the bougie, and introduce another made of soft materials, exactly to the same extent, by which we take off the impression; with this and the other symptoms, we judge of the stricture. This being determined, we are then to introduce a third bougie, properly armed with caustic, and oppose it to the stricture for the space of fifty seconds, or a minute; beyond ninety seconds I have not applied a caustic bougie to a stricture.

With respect to the size of bougies, I confess that I have not been in the practice of using such large ones as others have done; those that I have employed, have not exceeded in diameter a fifth, or at most a quarter of an inch.

The casts of the urethra taken by Mr. Home from the dead subject, cannot regulate the urethra of a living person. He talks of the canal, meaning the urethra, passing over the prostate gland. Anatomy tells me, that the portion of the urethra which is next to the bladder, is surrounded by the prostate gland; of course, it passes *through*, and not *over* the gland.

With regard to the effects of caustic, although I cannot in my short experience boast of cures performed, yet I have noticed, after the use of caustic, that the urine has been voided

in a free regular ſtream; that the pain attending it is trifling; and no one untoward ſymptom has hitherto occurred.

I was not a little ſurpriſed in the caſe of an officer belonging to the navy, where I had removed two ſtrictures; the firſt, four inches and a half from the external orifice, ſeemed to be removed by two touches of the cauſtic; the other, ſix inches and a half from the orifice, required twelve applications, in the laſt a ſlight hæmorrhage enſued; a common ſized bougie paſſed eaſily into the bladder. I expected now to have no difficulty; two days after, however, I was ſurpriſed to find that I could not paſs the bougie beyond the place where the firſt ſtricture had been. I had recourſe again to the cauſtic, which was only uſed once; no difficulty has ſince occurred in paſſing a bougie on to the bladder, and the gentleman is now without complaint. The diſeaſe was of two years ſtanding.

I have the honour to be, GENTLEMEN,
Your moſt obedient humble ſervant,
ALEXANDER ABERDOUR.

Prince's Place, Lambeth, Oct. 13, 1800.

Case of a diseased Bladder, with Enlargement of the Prostate Gland, and other morbid Appearances. By EDWARD FORD, F. S. A. Surgeon to the Weſtminſter General Diſpenſary.

[With an Engraving.].

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

AS the Drawing which accompanies this caſe, exhibits ſome uncommon appearances, I have ſent it to you for publication in the Medical and Phyſical Journal, if you think it will not be unacceptable to your readers. Specimens of facculi in the bladder, and of falſe paſſages in the urethra, are probably to be ſeen amongſt the morbid preparations of many anatomiſts; but the hiſtories of ſuch diſeaſes have not been ſo frequently offered to the public as their importance requires.

Bonetus has recorded inſtances of ſtones depoſited in ſacs of the bladder; and Morgagni has enriched this ſubject by the recital of caſes, in which a ſtone was ſometimes diſtinctly felt, and at other times could not be perceived, the cauſe of ſuch uncertainty being afterwards found to ariſe from facculi; ſo that this illuſtrious writer thought it neceſſary to warn the lithotomiſt,

A diseased Bladder with an extraordinary enlargement of the prostate Gland.

Drawn by Dr Baillie

Skelton fe

Printed for R Phillips, N°71 St Paul's Church Yard

miſt, as he values his own reputation, or the ſafety of his patient, not to operate, unleſs he diſtinctly feels a ſtone in the cavity of the bladder at the time of operating.

The ſubject of this paper was ſeventy-four years of age, and had been for ſeveral years liable to complaints in the urinary paſſage, for the relief of which, he had uſed ſuch means as had been at various times preſcribed for him; he had occaſionally ſuffered under fits of the gout, but the general ſtate of his health might otherwiſe be ſaid to be good: the earlier part of his life was ſpent in the Eaſt Indies, but by temperance and regularity he had preſerved his conſtitution tolerably free from the diſeaſes incident to hot climates.

I was called upon to ſee him about a year before he died; he was then diſtreſſed exceedingly by a conſtant and almoſt perpetual irritation to void his urine, attended with conſiderable pain, and an itching ſenſation in the urethra, almoſt intolerable; a copious diſcharge of mucus, mixed with blood, generally followed his urine; and whenever this happened, his pain was conſiderably aggravated; he ſometimes had a ſuppreſſion of his urine, which was eaſily relieved by the uſe of the flexible catheter; at other times it paſſed involuntarily, and particularly if any degree of force had been uſed in the introduction of a bougie or catheter.

Theſe difficulties were increaſed by a conſtipation of the bowels, a ſymptom which was eaſily explained; for, by examining with the finger introduced into the rectum, it was found that the proſtate gland was much enlarged, and protruded backwards into the inteſtine, ſo that it neceſſarily obſtructed the paſſage of the fæces. The urethra was examined by a middle ſized bougie, and found to be free from ſtricture, or any other embarraſsment but that produced by the enlargement of the proſtate gland, a circumſtance which impeded, in ſome meaſure, the paſſing of the bougie into the neck of the bladder.

The ſymptoms under which he laboured, evidently requiring a further inveſtigation by a ſound or ſilver catheter, in order to aſcertain whether or not there was a ſtone in the bladder, this trial was made by ſeveral ſurgeons; but it was found impracticable to introduce either of theſe inſtruments; the ſilver catheter would apparently paſs up the whole length of the urethra, but upon attempting to give it that kind of turn neceſſary for this examination, it was found that its point was in a confined ſtate, that it could not be liberated from ſome ſtricture it underwent; in ſhort, that it had not paſſed fairly into the cavity of the bladder. From the frequent returns of exceſſive pain, the patient was often ſolicitous of having his diſeaſe examined as accurately as poſſible; and I was once fortunate

enough to introduce a ſound into the bladder, but was not able to diſcover that it contained a calculus. He proceeded in this melancholy way for ſeveral months, with ſhort intervals of eaſe procured at times by the drawing off his urine, by anodyne gliſters, by aperient medicines, by the warm bath, and ſuch other temporary expedients as the exigence of the moment ſeemed to require.

In the beginning of laſt Auguſt his health gradually declined; his appetite failed; the bowels became more conſtipated; the deſire of voiding his urine became more frequent and painful; he was tormented with a violent pain in his back and loins; and the diſcharge from his bladder was bloody, purulent, and fœtid; ſoon after, a tenſion took place in the cavity of the abdomen, ſucceeded by a colliquative purging, and he became heavy, comatoſe, and died.

The body was opened on the ſucceeding day, in the preſence of Mr. Pooly, his apothecary; and the appearances on diſſection fully explained the ſymptoms which the patient had ſuffered.

The thoracic viſcera were in a ſound and healthy ſtate.

In the cavity of the abdomen, the liver, gall bladder, omentum, ſpleen, ſtomach, and pancreas ſhewed no marks of diſeaſe; ſome portions of the inteſtinal canal were a little inflamed, the kidneys were both conſiderably ſo; the bladder was contracted, and contained a ſmall quantity of purulent urine; and a ſtone about the ſize of a cheſnut was found ſlightly adhering to an ulcerated ſurface near the proſtate gland; the internal membrane of the bladder was in a black, gangrenous ſtate, very offenſive, and nearly approaching to mortification.

On the left ſide of the bladder, near the termination of the ureter, was a pouch communicating with the bladder, and correſponding in ſize and figure with the ſtone, which poſſibly might have been formed in that receſs; and afterwards paſſing from thence, fixed itſelf to the neck of the bladder, thereby increaſing the painful ſymptoms of this diſeaſe.

In the lower part of the left ureter there was another ſmall ſac, which alſo contained a calculus.

The proſtate gland was enlarged very conſiderably.

On examining the urethra, a ſmall valvular orifice was ſeen on its ſuperior part, about an inch from the neck of the bladder, to which the opening immediately led, without penetrating its inner coat; it was ſufficiently large to admit the bulbous end of a catheter; and from its ſituation, it is highly probable that whenever a ſilver catheter was introduced for the purpoſe of drawing off the urine, it overcame the ſlight reſiſtance of this valve, and paſſed into the falſe paſſage; whilſt, on the contrary, an inſtrument of a ſofter texture, a bougie, or catheter made of

of elaſtic gum, would glide eaſily into the bladder. It is impoſſible to ſay at what period this preternatural opening was formed; whether it was made by the paſſing of bougies in an early part of life, or whether it was formed at a later period, when the proſtate gland increaſing in bulk, rendered the introduction of the ſilver catheter an operation of difficulty.

The inflammation in the kidnies, the ſtone in the bladder, the ulceration which it had ſeemed to produce, and the conſequent gangrenous ſtate of the parts, manifeſtly explain every circumſtance which attended the final termination of this caſe; whilſt the ſac, connected with the bladder, evidently ſhews the hazard of lithotomy, when the ſtone is not felt at the moment of operation, confirming the practical obſervation of the celebrated Morgagni.

Golden-Square, Oct. 27, 1800.

Explanation of the Plate.

a, The proſtate gland enlarged.
b, Ulceration near the neck of the bladder, on which a ſtone was found ſlightly adhering.
c, The urethra.
d, A bougie paſſed into the preternatural opening in the urethra.
e, A portion of the rectum.
f, The vas deferens.
g, A ſac formed from the bladder.
h, The left ureter, with a ſac, which contained a ſmall calculus.
i, The internal coat of the bladder, in a ſtate nearly gangrenous.

MONTHLY REPORT of DISEASES,

Admitted under the Care of the Physicians of the Finsbury Dispensary, St. John's Square, Clerkenwell.

From September 20 to October 20, 1800.

Continued Fever	60	Dyſpepſia, Gaſtrodynia, and Enterodynia	11
Quotidian	1	Aſthenia	16
Pneumonia	7	Catarrh	5
Small-Pox	1	Pleurodyne	6
Rheumatiſm	15	Cough and Dyſpnœa	11
Cholera	6	Jaundice	2
Diarrhœa	13	Nephralgia	1
Dyſentery	29	Phthiſis Pulmonalis	6
Menorrhagia	5	Hypochondriaſis	2
Amenorrhœa and Chloroſis	10	Scrophula	2
Scirrhus Uteri	2	Prolapſus Ani	1
Hæmorrhois	1	Hectica Senilis	1
Eryſipelas	1	Chronic Eruptions	11
Opthalmia	1	Acute diſeaſes of Infants	12
Cephalæa	3		
Dropſy	9		

The cholera has now nearly disappeared, and the diarrhœa and dysentery have been less frequent than in the preceding month; but the latter disease is become more severe, and has assumed a more decided character. The symptomatic fever, however, by which it is generally accompanied, has been very slight, and in some instances scarcely perceptible. In those persons whose viscera have been injured by a course of hard drinking, or by previous attacks of similar complaints in a hot climate, the dysentery proves singularly obstinate, and, if it does not terminate in death, leaves them in an extreme state of debility and emaciation, with a most exquisite tenderness and irritability of the alimentary canal; and it is only by a strict attention to diet and regimen, that they gradually recover a tolerable share of health and strength, which require ever afterwards the greatest care for their preservation. Notwithstanding the prohibition of opium in this disease, by several respectable authors, its daily administration, after the operation of a purgative, so far from producing any bad consequences, seemed to promote the cure, and invariably afforded great ease and comfort to the patient. It is better that it should be combined with ipecacuanha, but this perhaps is of little importance.

The cases of pneumonia were none of them formidable. General blood-letting was not once required. The application of leeches to the thorax, and the repeated use of blisters, with antimonials, calomel, and opiates, proved fully adequate to the cure.

The rheumatism was mostly of the chronic kind. In several afflicted with it, a pill containing one grain of opium, and one of calomel, taken daily for about ten days, was of the most eminent service, after sudorifics, bark, and guaiacum had been administered for a long time without any benefit whatever.

It is seldom that an intermittent fever appears in our list. This disease, which in the time of Sydenham was one of the principal epidemics of London, is now rarely to be met with. When it occurs, it is commonly in labourers who have lately returned from the fenny counties, where they had been engaged in the business of the harvest.

The case of ptyalism, inserted in the catalogue of the last month, being attended with circumstances rather unusual, is perhaps worthy of notice. A man about fifty years of age, of a strong and plethoric constitution, has for these six years past been affected with a preternatural discharge of saliva, to the amount of a pint in the twenty-four hours, and of a very viscid consistence. It takes place chiefly in the morning after rising from bed, when he finds a sense of fullness and uneasiness about his head, which is immediately relieved by the spitting. His health is tolerably good, and the other secretions are natural. There appears to have been no obvious cause of his complaint, but he mentions that he had a very severe fever about six months before he perceived it. He is in the habit of smoaking tobacco, but he has found that the omission of the practice for a considerable time occasions no alteration in the discharge. What is remarkable, he is enabled, by a voluntary effort persisted in for a few days, to reduce the secre-

tion to its natural quantity. At the same time, however, he becomes affected with head-ach and giddiness; his appetite fails him; and the stomach and abdomen are painful and much distended. These symptoms are then relieved by a profuse discharge of blood from the hæmorrhoidal veins. By again encouraging the secretion of saliva, the hæmorrhoids cease, and he regains his usual health. He has consulted a variety of physicians and medical practitioners, and has undergone repeated courses of medicine for the alleviation of his complaint.—Purgatives, sudorifics, tonics, diuretics, mercurials, issues, and a vegetable diet have all been tried in vain. Blood letting to the amount of ten ounces puts a stop to the discharge for six weeks or two months, without his experiencing the above mentioned morbid symptoms. But as the repeated loss of blood must necessarily weaken him much more than the increased secretion of saliva, it is surely a remedy more to be dreaded than the disease.

Although the continued fevers in the last month have exceeded those in the preceding by a small number only, we are concerned to state that the proportion of mortal cases has very considerably increased. There has not appeared, however, any additional violence or malignity in the symptoms; in almost all the instances of fatal termination, the patients died at a very extended period of the disease, their strength being rather gradually exhausted by its duration than overpowered by its force. One young person expired at the end of the sixth week in such an extreme state of emaciation, that, on an inspection of the corpse, one would have supposed her to have been the victim of the most lingering consumption. About the end of the third week, a complete jaundice took place; but it had almost entirely disappeared before her death. The febrile heat subsided at the beginning of the fourth week; the pulse also became less quick, and did not regain its former rapidity till a day or two before she died. It happens perhaps more commonly than is imagined, that in these fevers the heat of the skin is not raised above the natural standard. In one instance of this kind, which occurred to the writer of this article, the pulse beat only seventy-two strokes in a minute: thus the two circumstances which have been generally regarded as the most essential characteristic of the presence of fever were entirely wanting.

The contagion from which these fevers originate is constantly generated and preserved in the dirty crowded dwellings of the poor. Several circumstances, but principally certain states of the air, favour its formation and extension, and influence its activity and virulence. During the last twelve months, indeed, there has unfortunately existed a cause much more powerful in promoting the operation of contagion on the lower class, than any properties of the atmosphere—a lamentable deficiency of the common articles of nourishment. To this, which of itself is well known to be a principal pre-disposing cause of the typhus fever, may be added the gloomy and depressed state of mind, which parents at least must experience, when surrounded by a hungry offspring, they find themselves unable to satisfy their urgent demands for bread. Hence also the recovery of convalescents is unusually slow; they are more liable to relapses, and often sink into many

lingering disorders, of which debility is the principal cause and symptom.

The loathsome circumstances attending the crowded habitations of the poor in large cities, and their absurd and destructive methods of domestic economy, which prove a never failing source of febrile contagion; their extreme misery and suffering when once a fever has taken possession of their families, and the dreadful ravages it occasions among them, have lately been very accurately and pathetically described by three physicians, whose professional avocations have, for a number of years, led them to be extensively acquainted with the condition and diseases of the poor in the metropolis, and in the populous towns of Manchester and Liverpool, and whose humanity and benevolence render them not less an honour to their race than their learning and medical skill to their profession.*

In consequence of the forcible representations of Dr. Ferriar of Manchester, several respectable gentleman of that town formed themselves into a board of health, and opened a subscription for the fitting up an hospital or house of recovery, for the reception of the poor, ill of contagious fever. Into this house the patients are removed as early as possible. Their infected garments are taken off, to be purified and restored to them on their dismissal; their persons are made clean by lukewarm water; they are put into ventilated wards, where they have the advantage of medical attendance, medicines, and nursing. In the mean time measures are taken to destroy the contagion in the habitations they have left. By whitewashing, ventilation, soap and water, slaked lime, and the vapour of the nitric acid, their tainted apartments are completely purified and made fit to receive their now wholesome tenants with safety. —The advantages which have resulted from this admirable institution have exceeded the most sanguine hopes of its benevolent founders. In several of the streets of Manchester, where the fever was wont to rage in its most destructive form, it is now nearly annihilated.

We are happy to hear that some public-spirited individuals have it in contemplation to attempt the establishment of similar institutions in this metropolis. Every medical man, who is in the habit of visiting the sick poor, must give his testimony for the necessity of such a plan; and when the inhabitants in general shall be made fully acquainted with the alarming magnitude of the evil, and the easy and effectual means of greatly diminishing, if not of absolutely removing it, we have good reason to hope that the noble spirit of charity, by which they are distinguished throughout Europe, will not long delay to accomplish an object more important, and fraught with more useful consequences to the community, than any which for a long time past has engaged the attention of the benevolent.

W. W.
J. R.

* See Dr. Ferriar's Med. Histories and Reflections, Vols. 1, 2, and 3; Dr. Currie's Med. Reports on Fever, &c. and Dr. Willan's Account of Diseases in London in our Journal for April, 1800.

Hiſtorical Sketch of the Uſe of the Affuſion of Cold Water.

By HENRY REEVE, Student.

" In quibus explicandis non dubitabo auctoritate antiquorum virorum uti, maximèque Hippocratis, cùm recentiores quoque medici, quamvis quædam in curationibus mutarint, tamen hæc illum optimè præſagiſſe fateantur."
CELSUS.

FROM the writings of learned men, and the moſt authentic hiſtorical records, it appears, that no nation, however barbarous and uncivilized, has yet been diſcovered totally unacquainted with diſeaſes and the knowledge of remedies. The various circumſtances that might lead to the diſcovery of medicinal virtues and powers, are with difficulty aſcertained; but the learned Dr. Cullen has ſuggeſted, that the rude and ignorant muſt have been directed to the invention of remedies by the inſtincts ariſing in certain diſeaſes, by accidental obſervation, or by random trials, to which pain and uneaſineſs often lead. It ſeems probable, therefore, that cold water has been in the liſt of remedies among all nations from the earlieſt ages. The uſe of water as a common drink, and its being ſo well adapted by Nature for the various purpoſes of the animal œconomy, muſt ſoon have attracted attention for the cure of diſeaſes; and as bathing has been univerſally practiſed, experience has proved that the external uſe of it is no leſs beneficial and ſafe.

If we look into the old writers on phyſic, we ſhall find that cold water has been recommended and employed in fevers in the moſt ancient times: And it might have been expected, from its well-known properties and good effects, that the uſe of it would have continued, and have been brought into general practice; but it has ſometimes been highly extolled, and at another time almoſt totally neglected, which muſt be imputed to practitioners in phyſic ſearching after more compound remedies, and therefore deſpiſing the ſimplicity of water; and moreover, to their obſerving it prove very uſeful in ſome inſtances, yet attended with pernicious conſequences from miſapplication in other caſes.

Theſe trifling obſervations were occaſioned by reading the following remark in a late claſſical and ingenious publication " On the Effects of Water in Fevers and other Diſorders," by Dr. Currie. After enumerating the effects and advantages of the affuſion of cold and warm water, in chap. x. p. 75, the Doctor goes on to ſay: " The practice of giving cold water as a drink in fevers, was common among the ancients; and

immersion in cold water they occasionally employed, but the *affusion of it* on the surface of the body seems to have been *wholly unknown.* Ablution of the surface with cold water was first practised in modern times at Breslaw, in Silesia, as appears from a dissertation, by I. G. de Hahn, under the title of Epidemia verna quæ Wrateslaviam, Anno 1737, afflixit."

It would be needless to cite the numerous instances that might be adduced of the use of cold water in fevers, inflammations, &c. from the oldest authors; and as the external use of it, in the way of ablution and affusion, seems to have been doubted, and not generally known, I shall humbly attempt to prove that it was both known and practised long before the epidemic in Silesia.

The first author who notices the use of water in diseases, together with almost every thing important to the science of medicine, is Hippocrates, who appears to have been a strenuous advocate for the use of it, both as an internal and external remedy. It may be remarked, however, that Hippocrates in his account of epidemics, which is wholly employed in treating upon fevers, delivers the particular history of the disease, and rarely mentions the remedies. We are therefore not able confidently to decide, whether he always used the cold affusion in cases of fever; although we may conclude that it was not neglected or disregarded by him, since we find in Case 7, book 1, the patient drank largely of cold water, and had it poured upon his head, which moderated the delirium, and he became rational and recovered, having at the same time a critical hæmorrhage from the nose. Sir John Floyer, in his Psychrolusia, or History of Cold Bathing, has observed, that Hippocrates describes, in his Aphorisms, the virtues of hot and cold water, without mentioning affusions, fomentations, or baths; but the τὸ ψυχρὸν or τὸ θερμὸν, relate to all of them equally. The term used by Hippocrates is καταχλυσμος or καταχυσις, which signifies perfusion, or affusion, and was performed by a servant, who poured the water upon those persons who were recommended to try its effects in various diseases; and the same virtues are ascribed by him to this method as to cold baths. If the internal use of cold water was only known to Hippocrates, he would not have given directions about affusions, lotions, and fomentations, as he has done in his tracts upon the use of liquids, and upon the diet in acute diseases; and especially as the latter part of the tract De liquidorum usu, is entirely upon the effects of καταχυσις, or affusion. Besides, it seems probable that he was well acquainted with the necessary cautions to be attended to in applying the affusion, since, to supply the deficiency of thermometrical observations, he advises the skin of the patient,

or

or of the person who pours on the water, to be the criterion of the degree of cold or heat; and he cautions against proceeding to any great excess, which might prove injurious. In the cure of typhus he advises to refrain from immersion for the first few days, but recommends cloths wetted with cold water to be applied where the patient complains most of heat; which method answers to the "lavatio frigida," as practised by Dr. Gregory at Edinburgh. Hippocrates, after mentioning the advantages of drinking and bathing in cold water, observes that it produces more powerful effects by affusion, δυνατωτερην καταχυσιν; and as he has studiously avoided the appearance of empiricism by combining reasoning with events, he thought the cold water produced heat and sweat, and that the heat cured the diseases for which the use of water was most effectual.

Although Asclepiades, Celsus, Galen, and many other old authors, have noticed the use of cold water, it does not appear that they generally understood the affusion of it upon the surface of the body, or that such a mode of applying it was in great repute among them. Yet we find Aretæus, in his chapter De curatione Phreniticorum, advises the liberal affusion of cold water upon the patient; and Galen also practised ablution in ardent fevers; and in Lib. x. de Methodo Medendi, he has laid down rules for the proper application of it. And other writers have recommended in vertigo and inveterate head-achs, "ut caput frigidâ aquâ perfundant." The antiquity of the external application of cold water may perhaps be further illustrated by the relation of Augustus Cæsar's case, as mentioned in his life by Suetonius: "Cum etiam distillationibus jecinore vitiato ad desperationem redactus, contrariam et ancipitem rationem medendi necessario subiit, quia calida fomenta non proderant, frigidis curari coactus, auctore Antoniâ Musâ."—Sueton. lib. ii.

History informs us that the American Indians have always practised cold immersion for the cure of fevers, to which they are particularly subject; nor is this practice confined to warm climates, since the northern nations make use of that custom both for the prevention and cure of diseases. The affusion and ablution of the body might first take its origin from the custom of purifying the body with water, in great esteem among the patriarchs, and imitated from them by the Egyptians, Greeks, and Romans; and the use of it, probably, became more general at the introduction of Christianity, when the ceremony of baptism was universally practised by what was called the trine immersion, or by placing the persons in the font and pouring water on their heads and bodies three times. In a work published about the beginning of the present century, entitled

Pſychroluſia, or Hiſtory of Cold Bathing, by Sir John Floyer and Dr. Baynard, the uſe of cold water applied to the ſurface of the body is much recommended and inſiſted upon for the cure of almoſt all diſeaſes; and although that book partakes too much of what would juſtly be called medical enthuſiaſm, yet it contains many important facts and uſeful obſervations. It ſeems rather remarkable that Dr. Currie ſhould not have referred to this book among others which he has noticed, ſince it would have furniſhed ſome ſtriking facts of no ſmall conſequence to his ingenious theory and judicious practice. Dr. Baynard mentions many caſes of perſons who have leaped into a pond, or any other water, in their delirium from fevers, and not one ever received any harm, but were thereby preſently cured. And he adduces inſtances of maniacal perſons being plunged into cold water, and having ten or twelve pails of water thrown over them during the paroxyſm of inſanity; and refers to a remarkable caſe related by Dr. Willis, in his Chapter de Delirio & Phrenitide, where the ſame means were uſed with equally good ſucceſs. No other work of importance, concerning the application of cold water to the human body, appeared till the year 1785, when an ingenious eſſay was publiſhed by Mr. Rigby, of Norwich, "On the Theory and Production of Animal Heat, and its Application in the Treatment of Diſeaſes. As far as relates to the ſimple abſtraction of heat from the ſurface, the Author of that Eſſay ſeems to have ſaid as much as has been ſince repeated by Dr. Currie and others; and the obſervations it contains upon the treatment of cutaneous diſeaſes, (eſpecially ſmall-pox, ſcarlatina, and meaſles, and local inflammations) are valuable, and deſervedly claim attention. Hence it appears, that the external uſe of cold water has been known and practiſed from the earlieſt periods down to the preſent time; and this practice has not ariſen as the mere ſuggeſtion of hypotheſis, or the product of ſpeculative inquiry, but has been eſtabliſhed and confirmed by long experience. Yet, after all that can be found in ancient authors upon the affuſion in fevers and other diſeaſes, it will be readily acknowledged that their practice was unconfirmed, and the concluſions drawn from their experience were vague and uncertain. And it will be as readily acknowledged, that we are greatly indebted to Dr. Currie, who, by a diligent inveſtigation, conducted with judgment and accuracy, has corrected the errors and ſupplied the defects of preceding writers, and has been a valuable agent in eſtabliſhing the uſe of a remedy in the art of medicine, endued with the moſt efficacious properties, and admirably calculated to produce the greateſt benefit to all mankind.

Edinburgh, Oct. 15, 1800.

To

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IT affords me the greateſt ſatisfaction, that I have it in my power to corroborate the teſtimony of a reſpectable practitioner, relative to the highly antiputreſcent properties of the flos cerivisiæ, which in no caſe has appeared more conſpicuous than in the following:—

The ſon of W. M. of this town, ætat. 14, was attacked on the 10th of July, 1800, with the uſual ſymptoms of Typhus, attended with violent pain in the head, and a fixed pain in the abdomen. Judging the caſe to be highly dangerous, I ordered him a ſtrong decoction of bark, with powder, &c. and aromatics; a free uſe of Port wine; and directed that every thing he drank ſhould be made ſour with with the acidum vitriolicum aromaticum. 11th, Still continues exceeding ill; pulſe quick and ſmall; applied the thermometer, which immediately roſe to 100; ſkin very dry and the mouth and fauces furred and black. I ſaw him again the ſame evening, when he was highly delirious, nor had the quantity of bark he had taken any effect in counteracting the putrid diatheſis: the pain in the ſtomach ſtill continued; and the fæces were regularly diſcharged, but quite black and offenſive. Applicet. emplaſt. canth. dorſo. 12th, The fever ſtill continues with little alteration; he is quite comatoſe this morning; no tendency to perſpiration, but ſkin quite dry. Having peruſed an account in your excellent Journal, of the utility of bathing the patient during the hot fit, I determined to give it a trial, and alſo to lay aſide the bark; and as the caſe appeared to me a loſt one, rely wholly on this method and a liberal uſe of yeaſt. The very idea of applying cold water during the febrile heat, appears to an unenlightened mind very dangerous; and the father of the patient being a poor man, and uninformed, I found ſome difficulty in procuring his conſent; nevertheleſs, having repreſented to him the imminent danger of the caſe, and aſſuring him it had been repeatedly practiſed with ſucceſs, he acquieſced in my advice, and determined to put it in immediate execution. The method recommended by Dr. George Moſſman, I conceived to be the beſt, and accordingly I ſponged him all over with cold vinegar, and directed the free uſe of yeaſt and wine. He was ſponged again at night, and I ſaw him ſoon afterwards evidently better, his pulſe being regular and body cool: He had a good night's reſt; and on applying the thermometer next morning, it was at 80. Finding ſuch a beneficial effect, and in ſo ſhort a time, I deſired that the yeaſt (the doſe of which was a large

ſpoonful

ſpoonful ſix or eight times a day) and the uſe of the vinegar might by no means be omitted. From this period he became evidently better; in two days after the yeaſt was diſcontinued: the quantity he had taken was about a pint, and he had been ſponged four times.

On conſideration of the wonderful change which ſo rapidly ſucceeded the adminiſtration of the yeaſt, I cannot but imagine it to be the beſt remedy in putrid fevers ever yet diſcovered. It is well known to ſea-faring men, that if meat, after having become putrid, is immerſed in yeaſt, or only covered with it for the ſpace of thirty-ſix hours, it becomes as freſh and as good as ever. This intelligence I had from an officer in the navy, who had tried it many times. It may be urged in reply, that however potent a medicine may be when applied externally, it has not the ſame effect internally taken; this has been proved in the analyſis of lithontriptic remedies. Have not mercurial preparations the ſame efficacy (or nearly) in cauſing a ptyaliſm, whether externally applied or internally adminiſtered? Why is relief expected from the emplaſtrum aſafœtidæ, but that the antiſpaſmodic properties of the aſafœtida are taken by the abſorbents into the ſyſtem?

With reſpect to the efficacy of cold bathing, (or ſponging, which is nearly ſimilar) it is too well known to need any comment; nor are its valuable properties by any means confined to one particular complaint. I have witneſſed its good effects in phthiſis, when every other remedy had failed; by bathing the cheſt morning and evening with cold water, it has leſſened the frequency of the cough, kept the tongue moiſt, and the patient has experienced from its uſe the moſt grateful ſenſations. Perhaps I may be too ſanguine in my expectations, I may too fondly cheriſh the idea; but it is ſtill impreſſed on my mind, that if the generality of medical practitioners would give it a few trials, it will be found a moſt valuable remedy. It is not from one or two inſtances that I wiſh any one to form even an opinion, for certainly no deciſion can be made: But particularly among the lower claſſes of people in country villages, where medical aid cannot be immediately obtained, it would be an act of charity if the clergyman, or any conſiderate inhabitant, would ſee it duly adminiſtered; and I am confident they would reap that heart-felt ſatisfaction which is ever the attendant on humanity. I have the honour to be,

GENTLEMEN,

Your humble ſervant,

Winſlow, July 26, 1800. I. H. GROSE.

P. S. It has been urged againſt the uſe of yeaſt, that it is violently purgative; this is what I never ſaw, but, on the contrary, it had always the effect of a cordial.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IF the following Caſe and Obſervations upon Polydipſia are thought intereſting to your readers, or ſuited to afford Dr. Dyce a few hints upon the treatment of this affection, they are at your ſervice.

J. F. a man aged about 45 years, of a dark complexion, well boned and muſcular, but not inclined to corpulency, has been affected for two months with violent thirſt, which has never had any remiſſion ſince he was firſt affected with it. In the night time, he ſays, that his thirſt is very great, and that he puts down a large decanter, containing one Scots pint of water, at his bedſide, which is not ſufficient for him during the night. In the twenty-four hours he will drink more than two gallons. He ſays that he has no other complaint but thirſt, except that he is generally coſtive. His appetite is much impaired, and he has ſeldom a deſire for food; he ſweats profuſely during the night and towards morning, and is often obliged to change his linen. Sometimes the quantity of water which he drinks makes his belly feel full, hard, and painful. He ſleeps pretty well ſome nights, but is often obliged to riſe early in the morning, on account of the thirſt and ſweating. Since he has been affected with this complaint he is more dejected in his ſpirits than formerly, and has not the ſame deſire for working; this, he ſays, is owing to his ſtrength being ſomewhat diminiſhed. He ſecretes a large quantity of urine, and voids it without pain; it has much the appearance of the urine of diabetic patients. His pulſe is about 90 in the minute. Three years ſince he conducted a diſtillery of whiſky, and was then liable to be affected with great and ſudden changes from heat to cold alternately. After the high duties were laid on, he gave up the diſtilling buſineſs and took himſelf to farming, which is his preſent employment. He was married and had ſeveral children; his wife died about a year and a half ſince, and within this laſt ſix months he has married a young woman. When I conſidered this patient's former courſe of life, and the ſtate of matrimony which he had lately entered into, I concluded that the cauſe of the thirſt was debility. I once ſaw a caſe of a gouty patient who was affected with a very violent thirſt inſtead of a paroxyſm of the gout; it yielded to nearly the ſame treatment as was employed for this patient. With the intention of removing the debility, and reſtoring the ſyſtem to its former degree of ſtrength, I had recourſe to tonics. Conſidering the

cortex

cortex to be among the chief of this kind of medicines, I prescribed it as follows:

Take of fine powder of Peruvian bark, one ounce; fulphat of zinc, half a drachm; mix them accurately together, and divide into fixteen doſes; one to be taken four times every day in a glaſs full of wine.

I ordered porter for his common drink, and a nouriſhing diet. After uſing the bark for four days he complained of coſtiveneſs; I ordered him one ounce of caſtor oil, which operated very well. To palliate the uneaſy thirſt, I preſcribed the tamarind decoction. After he had uſed theſe medicines for eight days he found his thirſt much diminiſhed. He is now taking an opiate every night, and fifteen drops of the acid elixir of vitriol in a glaſs full of water, three or four times every day; and a doſe of caſtor oil every ſeven days, which, he ſays, relieves the uneaſineſs and hardneſs of his belly very much. By perſiſting in this courſe for four weeks his thirſt was almoſt gone. To perfect the cure, I preſcribed for him a journey into the country, that he might have the advantage of a change of air, and drink Chalybeate water; but he could not get time ſpared for the purpoſe, and, as he was better, he continued at his uſual employment at home.

Aberdeen, Aug. 3, 1800. TUAAM PEAAL.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

THROUGH the channel of your valuable Publication many important diſcoveries and improvements, in the practice of medicine and ſurgery, are daily communicated to the medical world, from which, without doubt, the public will derive the greateſt benefit; and it muſt afford infinite ſatisfaction to every individual who contributes his mite towards the general fund of information, to find his endeavours thus powerfully ſeconded by ſo rapid and extenſive a circulation as that of this work, which has been ſo long wanted.

To the old practitioner it will impart an increaſe of knowledge, to the young one it will give a *zeſt* for medical inveſtigation; which, for want of a more general mode of communication than by private correſpondence, was not ſought after with the ardour its importance merits. Hence the utility of Medical Societies, where theories are brought face to face, and ſtand or fall as they are ſupported by

by the vivid colours of truth, or wear the gloomy aſpect of hypothetical reaſoning. By the aid, however, of the Medical Journal, the general ſociety of the medical world is formed, affording to each member an opportunity of offering his opinion; which, to avoid giving offence to the whole, ought to be given with accuracy and candour, and judging others diſpaſſionately; medical controverſy, and warmth of temper, will not advance the ſcience, but will lower the individuals in the opinion of a diſcerning public.

Among the numerous advantages to be expected from this periodical work, is to be reckoned one, not of the leaſt importance; to wit, the extinction of prejudice amongſt perſons in higher ſituations of life, who are not of the faculty; for it is an incontrovertible truth, that new diſcoveries not unfrequently meet with more difficulties from the want of the ſanction of gentlemen of rank and fortune, than from the forbearance of medical authority. Thus, at this preſent moment, we meet with a powerful oppoſition to the general introduction of the Vaccine Pox, and to the application of Digitalis Purpurea in pulmonic affections: Does not the frequent fatality of the natural Small-pox, in this and every other country, juſtify an attempt to eradicate a diſorder that is deſervedly held in horror? And, however mild the inoculated Small-pox may be, it cannot, I think, afford any *favourable* argument againſt the Vaccine, which appears, almoſt beyond a doubt, to have exempted from the Variolous thoſe who have undergone the former; and, beſides, poſſeſſes ſo many advantages which the latter cannot boaſt of.

And do not the very few inſtances recorded of perſons having recovered from phthiſis pulmonalis, juſtify every rational attempt to defeat the opprobrium medici? I am much inclined to believe that, in the two firſt ſtages of the diſeaſe, the Foxglove has produced wonderful effects, and will hope that by perſeverance and proper management, it may prove efficacious in the laſt ſtage.

A great deal has been ſaid on the ſubject of Quackery; I hope alſo to find a remedy againſt this evil in your very uſeful Journal.

In Ruſſia, where I was in regular practice during the ſpace of ſeven years, no one is allowed to viſit the ſick who has not been previouſly examined at the College of Phyſicians, under the following pains, viz. If he be a native, he is liable to be ſent into Siberia, and to have his property confiſcated; if a foreigner, to be ſent out of the empire. On the other hand, if any one be admitted by the College, notice is given through the medium of the St. Peterſburgh and Moſcow Gazettes, that

the Faculty of Medicine find N. N. qualified to exercise his skill as Physician, Surgeon, or Accoucheur.

And when a medical gentleman writes a prescription, he is obliged to subjoin his name at full length; and the apothecaries (who dispense medicines only) in like manner add their own and the prescriber's name to the label, with the date of the prescription.

If corrosive sublimate, or any other deleterious drug, be prescribed, the medical gentleman is obliged himself to explain to the apothecary for what uses it is intended.

A few years ago the great importation of British quack medicines into Russia, caused the apothecaries to present a memorial to the College of Physicians, praying that the sale of them might be prohibited, and they were accordingly prohibited at St. Petersburgh; but, I believe, that in other places little attention was paid to the edict.

Although all the laws above mentioned were not put into execution, and though some of them, and others which I have not noticed, appear severe, yet, as a great national concern, I think some measures ought to be adopted in this country to prohibit Quackery, as it is an evil that is daily increasing amongst us, and it is not uncommon on the Continent to hear the English nation called "a country of Quacks and Dupes."

In the course of the ensuing month I shall transmit, for your approbation, some Medical Cases and Observations. I remain,

GENTLEMEN,

With great respect,

Your obedient servant,

GEO. CAYLEY, M. D.

Durham,
Sept. 29, 1800.

Citizen CHAUSSIER, *on Amputation.*

IN the Philomathic Society of Paris, Cit. Chaussier has read a Memoir, containing Experiments on the Amputation of the articulating Extremities of the cylindrical Bones.

As this Memoir contains some interesting anatomical and physiological facts, we shall present our readers with some of the particulars. Several surgeons of eminence, both in England and France, have proposed and occasionally practised an excision of the articulating processes in diseases of the larger joints, instead of amputating the whole limb, and this practice has sometimes preserved to the patient, a limb which has afterwards become of considerable use. It was in order to determine

mine the practicability of this operation, that M. Chauffier has made several experiments upon animals, of which the following are the results:

Having laid bare by incision the upper extremity of the femur, he turned the head of the bone out of its articulation, and sawed it off, some way below the trochanter; so as to take away an eighth, a sixth, and sometimes a fourth of the whole length of the bone. He then brought together the muscles and skin, secured their union by a few sutures, and left the rest to Nature. The wounds always closed without suppuration, or any apparent exfoliation of the bone, and the cicatrix was compleatly formed at the tenth, or, at latest, the fifteenth day. In a month's time the animal began to make some use of the paws of the limb operated upon.

By examining at different periods the parts that had suffered the operation, it was found that the muscles had, by their contraction, forced the upper part of the femur upon one of the projecting points of the ischium; that the amputated extremity was rounded off, and covered with a cartilaginous substance; that the part of the ischium upon which it had been thrown, had also assumed a cartilaginous appearance, and sometimes formed an articular *fossa*, more or less deep; that the cellular substance around this new articulation, produced a kind of capsular membrane which contained a serous liquor; and the acetabalum gradually became filled up with cellular substance.

In order to ascertain what changes suppuration would produce in this process, the experiment was repeated upon a dog; but instead of promoting the union of parts by the first intention, the wound was irritated in several ways, and suppuration brought on.

The animal suffered much, and several abscesses were formed, which opened successively. However, after two months he was compleatly cured, and retained a very good use of the foot, After four years the parts were examined, and it was found that the extremity of the femur was attached to the ischium by a ligamento-cartilaginous substance, which fixed it upon this bone, and allowed of free motion in every direction. There was also formed at the extremity of the femur an apophysis, which gave attachment to the different muscles, and served instead of a trochanter.

The same operation, performed on the upper extremity of the humerus, had the same success, and gave very nearly the same results.

M. Chauffier repeated these experiments on the *lower* extremity of the femur, the cubital joint of the humerus, and the lower part of the tibia; and he even, in some cases, took away

the whole knee and elbow joints of different animals; but though none of them died, the operation never ſucceeded: The ſoft as well as the hard parts healed up well; but inſtead of forming a new articulation, the extremities of the upper and lower bones receded from each other, and the part below the articulation remained looſe and pendulous, and entirely uſeleſs to the animal. Theſe operations on ginglymus joints are, beſides, very difficult to perform, and attended with much hazard on account of the arterial ramifications; and could promiſe no ſucceſs in real practice, on account of not being ſurrounded and covered with any great quantity of fleſh.

At the concluſion of this Memoir, M. Chauſſier mentioned a curious caſe of a young man, with whom the upper extremity of the humerus ſeparated ſpontaneouſly, after a caries of the bone and tedious ulceration, which had at laſt been cured by the efforts of Nature. A new and very remarkable articulation had been formed in this caſe. The ſcapula ſent out a rounded protuberance like the head of a bone, and the humerus had a correſponding cavity which received it, and thus allowed the patient almoſt every uſe of his arm, as in its natural ſtate.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IF you think the following remarks on the inveterate ſpecies of Ulcer, which has lately been ſo deſtructive in his Majeſty's ſhips, worthy a place in your valuable Journal, the inſerting it will confer a favour on,

GENTLEMEN,

Your very humble ſervant,

Portſmouth, Auguſt 12, 1800.

JOHN BALLARD, Surgeon, Royal Navy.

I entered into the navy in March, 1798, with an appointment to his Majeſty's ſhip Triumph, then commanded by Captain William Eſſington; on entering on my profeſſional duty, I was ſtruck with the appearance of the ulcers, which had been for ſome time under the care of my predeceſſors; they were very different from the appearance of any ulcers I had ever ſeen before, either in private practice, or during my attendance at the General Hoſpital near Birmingham; I was therefore reſolved

ſolved to pay very peculiar attention to them, and obſerve their progreſs, for I really predicted in my own mind, that we ſhould have ſome trouble in the management of them. I collected what information I could reſpecting them from my profeſſional friends on board, and was informed, that a man with a very ill-conditioned ulcer had been received on board the Triumph from the guard-ſhip at Spithead, and from the date of his introduction into the ſhip, they had obſerved ſome alteration in the complexion of the ſores; but it did not ſeem to be ſo apparent to them as to me, who had ſo lately come from the ſhore; I did not, however, loſe ſight of my own opinion; it is true, two or three caſes healed firmly, but notwithſtanding, we could eaſily perceive, that every ſucceſſive caſe became more and more inveterate.—The Triumph ſailed with Lord Bridport on the 12th of April, 1798, with ſeveral bad caſes of ulcers in the liſt of ſick; we returned to Torbay about a month afterwards, with a conſiderable increaſe of theſe caſes; in ſhort, the ſituation appropriated for the reception of the ſick on board of a ſhip, was completely filled. Dr. Trotter, the phyſician to the fleet, was applied to, and ſome of the worſt caſes were ſent on ſhore; ſtill, too many were retained. We did not remain long at Torbay; and the Triumph's next cruiſe was not leſs than three months, during which time we were ſadly harraſſed with increaſing numbers of theſe deſperate caſes. Mr. Thomas Moffatt, the judicious ſurgeon of the Triumph, uſed every exertion to overcome this deſtructive complaint, and every external means that afforded even a gleam of hope was tried; the fumes of nitric acid were uſed three weeks with unremitting attention, but without any permanent advantage reſulting, and it was relinquiſhed on that account. The Triumph returned to Plymouth with a great number of theſe ulcers, and the greater part of them was ſent to the Naval Hoſpital there.

To a cruiſe on the coaſt of Ireland theſe baneful attendants followed us, now accompanied with alarming fever, which did not appear before, requiring the moſt active remedies of inflammation, which generally terminated it in three or four days, leaving the patient exceſſively reduced. Opium was then uſed with great advantage, by ſuſpending the irritation occaſioned by the continual abſorption of putreſcent particles into the ſyſtem. I am indebted to a very reſpectable phyſician in Birmingham, for an idea reſpecting the nature of the fever and inflammation attending theſe caſes; and he calls the fever a ſpecies of typhus, and the inflammation a ſpecies of eryſipelas, which accord perfectly with my ideas. I ſhould not have ventured to give this account to the public, for I am a very young ſurgeon;

ſurgeon; but I am actuated by very ſeducing motives; 1ſt. In juſtice to my worthy and much eſteemed preceptor from whom I received the firſt and the only rudiments of my profeſſion I at preſent poſſeſs, and partly on account of ſome information I have received ſince my return from the Weſt Indies, from a very reſpectable practitioner in the navy, that theſe ulcers are ſtill in exiſtence; and having myſelf been an actual obſerver of their deſtructive influence, I cannot, in conſcience, withold what I think the only means of eradicating them from the navy. The practitioner above alluded to, has told me, that his ſhip was free from any ſuch caſes, "till the introduction of ſome bad ones from a ſhip in the Channel ſervice, and in vain did he endeavour to eradicate them by external means. Thus circumſtanced, he reſolved to ſend every caſe, however ſlight, out of the ſhip, and totally deſtroy every thing that had been uſed in dreſſing them," viz. ſponge, lint, &c. and it is very pleaſing for me to remark, that this practice was attended with the happieſt effect: I have the teſtimony of himſelf, and my own actual obſervation, that he has not, at preſent, one ſolitary caſe of bad ulcer under his care. From theſe evidences, I moſt ſincerely recommend a ſimilar mode of proceeding in every ſhip in his Majeſty's ſervice, in which theſe caſes exiſt, for I am convinced that no other *means will be effectual in baniſhing them from the Navy.*

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

FOR ſeveral years I have been diſſatisfied with the general and indiſcriminate uſe of Calomel in the diſeaſes of children; I am not more certain of any one fact that pertains to medicine, than that I have ſeen many children who have fallen a ſacrifice to the improper application of this medicine. Calomel when mixed with ſugar, forms a medicine agreeable to the palate of the child; its exhibition is eaſy to the mother or nurſe, and it may with ſafety be given as a purge, when a purge is indicated. When given as a purge, its action is confined to the firſt paſſages, but when the doſe is frequently repeated, either for the purpoſe of obviating habitual coſtiveneſs, or with any other intention, it is abſorbed by the lymphatics, and enters the ſyſtem, by the action of which it is decompoſed. The oxygene diſengaged from the mercury, forms a powerful ſtimulus to the ſyſtem, increaſing the action of all its irritable fibres: the

the action of the ſyſtem thus increaſed, produces an increaſed decompoſition of the oxygene gas abſorbed by the lungs; this decompoſition is attended with an increaſe of animal heat, which, in its turn, acts as an additional ſtimulus, and that ſtate of the ſyſtem is produced, which is called the *mercurial fever*; this fever, in adults, ſoon runs into indirect debility. Although mercury does not appear to have ſo powerful an action on the ſalivary glands of children as it has on adults, yet, I apprehend its general effects upon the ſyſtem are greater.

The irritability of an infant is to that of a perſon in middle age as 2 to 1: the pulſe of the latter is from 60 to 80 ſtrokes in a minute; the former from 120 to 140. The increaſe of excitation produced on the fibres of an infant by an increaſe of ſtimulus, will be double the excitation produced on the fibres of an adult from the ſame increaſe of ſtimulus, and the increaſe of indirect debility will be in the ſame proportion.

The injurious conſequences likely to flow to children from the high degree of excitation, and extreme ſucceeding debility produced by a mercurial courſe, I wiſh to impreſs upon your readers. Mercury has been erroneouſly held forth as a ſpecific in hydrocephalus, and is often given as a preventive of that fatal malady: Hydrocephalus appears to be the reſult of debility ſucceeding too high an action of the veſſels in the brain. If ſo, can any medicine more powerfully produce hydrocephalus than mercurial calces? I am, GENTLEMEN,

Your very humble ſervant,

Birmingham,
July 21, 1800.

WILLIAM CARSON, M. D.*
Practitioner in Midwifery.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

SHOULD you think the following mode of treating the reſiduum of vinegar, in the proceſs Acetum Diſtillatum of the Edinb. College, merits a place in the Journal, pleaſe to inſert it.

Edinburgh, Aug. 13, 1800. B. B. SIMONS, M. D.

THE College orders "eight pounds of vinegar to be diſtilled in glaſs veſſels with a gentle heat; let the two firſt pounds that

* Dr. Carſon will ſoon preſent the public with a work on the *Treatment of Parturient Females, chiefly with a view to prevent abortion.*

that come over be thrown away, as containing too much water; let the four pounds next following be reserved as the diſtilled vinegar. What remains is a ſtill ſtronger acid, but being too much burnt is unfit for uſe." Some chemiſts, rather than throw away the reſiduum, add either the water that firſt paſſes over, containing a ſmall quantity of vinegar, or a portion of freſh, and diſtil. The vinegar thus obtained is never free from the empyreuma. Inſtead of adding water, I added about ℥iiij of finely powdered charcoal, previouſly heated and diſtilled to dryneſs, raiſing the heat or the furnace as the proceſs advanced. The reſiduum, thus treated, was entirely deprived of empyreuma, and was thought by a gentleman, who taſted of ſeveral quantities taken from different periods of the proceſs, to be ſuperior in flavour. It is much concentrated, and, when added to the four pounds, is better calculated for pharmaceutical purpoſes. The price of charcoal may ſeem to militate againſt this mode of treating the reſiduum; but it cannot, for if the coal be waſhed, and dried in a tolerably ſtrong heat, the ſame effect will take place when added to the reſiduum of another proceſs. I have not aſcertained the preciſe quantity of coal neceſſary to correct the empyreuma, but, I preſume, a much-ſmaller may be employed.

To the Editors of the Medical and Phyſical Journal,

GENTLEMEN,

HAVING frequently met with caſes of Bronchocele, which were given up as incurable by thoſe who had been attending them, but yielded without much difficulty to a ſimple and ſafe remedy, I herewith ſend the formula, which I beg the favour of you to inſert in your Journal.

I am well aware that to medical practitioners in general, burnt ſponge is known to be the baſis of the Coventry remedy, and to have been often given for this complaint; but, nevertheleſs, facts warrant me to affirm, that either the cure of the diſeaſe is not in general well underſtood, or that the means are not employed with due regularity and attention.

I have many times known external ſtimulants, and mercurials, tried in vain; and ſometimes the ſpongia uſta itſelf inwardly given in other forms to no purpoſe; yet in the following manner it has ſucceeded.

℞. Spong. uſt. ℥ij. pul. gum. Arab. ʒij. pul. cinnom. ʒſs. ſyr. ſimpl. q. s. ut fiant trochiſci xxiv.

Care

Care muſt be taken that no more ſyrup be uſed than is abſolutely neceſſary to make the dry ingredients properly cohere; for which reaſon it muſt be added ſlowly, and the maſs muſt be beaten well. The lozenges are to be dried before the fire, on a plate that has been ſlightly oiled, to prevent them from ſticking; and muſt be kept in a bottle, or in a gallipot, tied over with ſkin.

One of them is to be taken twice or three times a day. I have known an inſtance where one was taken twice a day, for a great length of time, to no purpoſe; but when the number was increaſed to three, the good effect was ſoon evident.

Whether this medicine acts locally, and, if it acts locally, whether it is conveyed to the thyroid gland by means of abſorbents not hitherto diſcovered; or whether the thyroid gland is a mucous gland, and is ſtimulated to excretion by the action of this medicine on the neighbouring parts, I ſhall not pretend to determine. Suffice it to ſay, that I have cured a conſiderable number of perſons of the Bronchocele by this remedy, ſome of whom began to ſuffer much, and to be ſeriouſly alarmed, on account of the difficulty of deglutition and reſpiration, with which their complaints were at that time attended.

Burnt Sponge, it is well known, and has long been well known, is the moſt common remedy that is tried for the cure of this diſorder; but I have had frequent opportunities of knowing that it generally fails to effect a cure. This muſt proceed from the difference of the quantity given; or of the mode in which it is given. Some have adminiſtered it in the form of a ſoft bolus, to be diſſolved in the mouth. If its virtue depends, in any degree, upon its topical action, that muſt be very tranſient, unleſs the compoſition be dried.

Some years ago, I ſent a paper on this ſubject for publication to the Editor of a Medical Journal, who expreſſed a wiſh, that, previous to its publication, I would endeavour to aſcertain whether the ſpongia uſta really cures the diſeaſe in a ſhorter ſpace of time, when exhibited in this manner, than when ſwallowed at once.

I have made many attempts to decide this point; but, owing to the obſtinacy and impatience of the perſons who have laboured under the diſorder, and other circumſtances, I have hitherto been baffled in my endeavours. The frequent occurrence of the diſeaſe, and the frequent diſappointments that attend the ordinary modes which are employed for its removal, induce me to think that the publication of this formula may be uſeful, and ought not to be longer delayed.

In theſe troches the doſe of ſpongia uſta is a ſcruple. Some have recommended only that quantity, or perhaps only half a ſcruple, once a day; and that only during a particular period

of the moon. It is no wonder if so small a quantity of the medicine should often fail to produce a cure.

Did not this mode of exhibiting the burnt sponge, in some measure, create disgust, and excite nausea, in many persons of a delicate constitution, such as is generally the lot of those who labour under this complaint, a much larger quantity of the medicine might be prescribed with perfect safety. The late Mr. Webb, of Half-Moon Street, informed me, that he cured a large schirrous tumour of the abdomen, in a patient sixteen years old, by giving a drachm of it four times a day, till a pound was taken.

A kind of lozenge was prepared, and sold as a nostrum, many years ago, by a Frenchman of the name of Barbais; in which I had great reason to believe burnt sponge was a principal ingredient. These lozenges were sold at the enormous price of one guinea per pot; and each pot contained but a moderate quantity of the medicine.

I have seen a considerable number of letters, from various parts of the kingdom, but particularly from Blandford, and that neighbourhood, describing, in the strongest terms, the wonderful cures which had been performed by this remedy. Nevertheless, owing to the indolence of the person who prepared them for Barbais, who was for many years a cripple, and on his own account, after the death of the proprietor, the sale was not so great as it would otherwise have been.

Had the proprietor of this remedy practised the refined arts of a modern quack, he might have emerged from obscurity and have made his fortune; but he never solicited *peers of the realm* to certify more than was true, nor *a bishop* or *a judge* to assure the world, that they were convinced of the singular efficacy of *his nostrum*, from *their own experience*.

He did not open a warehouse in New Bond Street for the sale of his medicine, nor sport his carriage or his country house; nor had he the impudence to affirm, as other empirics have done, that his patients had been given over by eminent physicians, *who had never seen them, nor even heard of their illness*.

When I last saw the person who prepared the medicine before alluded to, knowing that he had derived but little advantage from it of late years, owing to his being in an obscure situation—that of a servant, and that he was of a very indolent disposition, I offered to give him, what I considered a reasonable consideration for his recipe, and if he would part with it on those terms, to make it public; but his demands were so exorbitant, that I could not comply with them. He then lived with Captain Wade, and had lived many years with Colonel Wade,

Wade, to whose father, Field Marshal Wade, the former proprietor had been a servant.

These particulars concerning a medicine which merits at least as high encomiums as any nostrum of the present day, will not, I hope, be deemed superfluous. I have great reason to believe, that burnt sponge was the basis of the composition, from the colour and taste of the lozenges; and from knowing that the person who prepared them, frequently purchased and calcined a considerable quantity of that article.

Having been very successful in the cure of the Bronchocele, I have long been anxious to communicate to medical practitioners in general, what I have embraced every opportunity of making known to individuals of the profession; and I sincerely hope, that by means of your widely circulated Journal, a knowledge of the great efficacy of this mild and safe medicine will be more generally diffused.

It is proper to add, that in a few cases, the same medicine, given in the form of pills, has cured the complaint; but I have not had it in my power to ascertain whether it will in general answer as well as when it is administered in the other form. I have the honour to be,

GENTLEMEN,

Your most obedient servant,

New Street, Hanover Square, October 9, 1800. JOHN RING

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Have thus far with the greatest satisfaction, perused your truly valuable Journal; which seems to me to be of intrinsic utility to the medical world, both from the variety of subjects it contains, and the perspicuity and accuracy which every where attends the execution of it. Should you think the following case of Amputation worthy to be inserted in your Publication, I offer it to your services. And am,

GENTLEMEN,

With great respect, your's truly,

Garstang, Oct. 2, 1800. WILLIAM KNIPE.

JOHN SMITH, aged 15, was afflicted with a number of large unequal tumors upon the left hand, which he says origi-

nated about ten years ago. His relations deſcribe their firſt appearance to be ſimilar to a number of warts; theſe have gradually increaſed in point of ſize, which has been very rapid within theſe few laſt years.

The appearance of the hand, on account of its ſize, was very aſtoniſhing. The tumors were ſeveral in number, although ſome of them were connected, forming an unequal appearance. The largeſt occupied the ſubſtance of the hand; ſeveral others, about the ſize of oranges, were ſituated upon different fingers, which laſt were disjointed, the ends of which were placed promiſcuouſly upon the top of the different tumors. A number of very large and diſtended veins were ſeen extended over the ſurface of the hand. The integuments were ulcerated in ſeveral places, and of a dark livid ſhining colour, having much the appearance of ſcrophula. The laſt two months, his health was much impaired; was affected with hectic fever, along with exceſſive perſpiration through the night. His conſtitution was emaciated; probably the hectic might be the effect of abſorption of aërated matter, together with the debility induced by the quantity of blood requiſite for the nouriſhment of ſo large a tumor. From the ſize, ſituation, and general appearance of the whole hand, with the impaired habit of the patient, amputation ſeemed eſſentially neceſſary; removing the tumors by diſſection was utterly impracticable.

The operation was performed on July 23, 1800, about two inches above the wriſt, by the double inciſion. After amputation I examined the hand, the weight of which was five pounds and a half; the circumference of the largeſt tumor was exactly twenty-five inches. The appearances upon diſſection were as follow: Upon removing the integuments, I found that the large tumor took its origin from the articulation between the carpal and metacarpal bones; this ſeemed covered on the upper part by a number of tendinous faſciæ; the whole of the tumors were ſurrounded by a conſiderable thickneſs of bone, which was particularly ſo at their different origins, where a degree of caries oſſium was obſerved. The bones of the fingers, where the tumors began, were likewiſe carious, and their perioſtium was denuded. The four metacarpal bones were completely obliterated, probably by the abſorption of oſſific matter. The internal part of each tumor conſiſted of a matter ſimilar to jelly, quite tranſparent, yet not tenacious. The ſtump healed in a fortnight, by the firſt intention; and the patient had neither ſtarting of the ſtump, nor ſymptomatic fever. I have ſeen him ſeveral times ſince, and find his health and appearance much improved. It may be worth while to notice, that the left foot has been for ſeveral years affected with hard

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ſmall excreſcences, ſimilar to nodes; theſe, however, remain of a ſtationary ſize. I have ſtated the caſe exactly as it occurred; but being a young practitioner, beg leave to ſuſpend my ideas reſpecting the phyſiological part of ſuch a production, flattering myſelf the ſtatement of the caſe may excite the attention of ſome able phyſiologiſt.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

A Faithful and unbiaſſed hiſtory of facts, whether favourable or otherwiſe, as they occur in the treatment of every diſeaſe, and an impartial narrative of the action of every new remedy as it appears to affect the living ſyſtem, would tend to elucidate many obſcure points in medicine, and greatly enlarge the ſphere of our knowledge; but it is to be lamented, that in the ardour of a new diſcovery, ſimple alleviation of urgent ſymptoms is too frequently magnified into a perfect cure, and a real or apparently ſucceſsful caſe or two, at once ſtamps the remedy with the character of infallibility. Hence, the frequent diſappointments experienced by others; and hence, the total rejection of a valuable medicine is ſometimes the conſequence of theſe exaggerated and hyperbolic praiſes.

Men are in general fond of the marvelous, and they are anxious to excite it in others; ſelf-love, and a fear of public cenſure, often induce them to conceal the unſucceſsful part of their practice, whilſt they relate with ſtudied care and attention the fortunate caſes only. Not ſatisfied with this diſingenuous concealment, it is much to be feared, that many are to be found in the profeſſion, who detail with circumſtantial minuteneſs, caſes which, probably, never had exiſtence, except in their own imaginations; or, having actually occurred, who warp facts, ſymptoms, and circumſtances, to force a coincidence with ſome adopted opinions, or for the purpoſe of ſupporting ſome preconceived and favourite theory. This weak, and we may juſtly add, criminal conduct, is productive of ſerious evils, as it not only miſleads the credulous and inexperienced practitioner, but tends to render error ſyſtematically permanent.

I have been led into theſe reflections from comparing the ſucceſsful practice of others, in the treatment of Epilepſy, with my own, which to my no ſmall regret and mortification, has hitherto proved uniformly unfavourable. At this I have reaſon to be the more ſurprized, as I had employed preciſely the

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ſame remedies which were given with ſuch very diſſimilar reſults by many of your correſpondents; and what adds to the ſingularity of my attempts is, that I puſhed the doſes of medicines beyond all previous example or precedent, ſo far at leaſt as I am acquainted. For inſtance, that of the nitrate of ſilver, mentioned by P. Mudie of Arborth, Dr. Cappe of York, and Dr. Sims, with ſuch commendations. I have adminiſtered it in chronic and recent caſes of epilepſy, to the quantity of twelve grains in a day, without any one perceivable effect; that is, four grains at a doſe given ter in die, having commenced with doſes of half a grain, which were gradually and daily increaſed.

Again, the cupr. ammon. ſo celebrated in the hands of others, has proved like the argent. nitrat. equally inert and unſucceſsful in mine. It was exhibited in ſmall doſes at firſt, and continued till the quantity amounted to twenty-four grains a day; and this increaſed quantity was perſevered in for fifteen days, but without the ſmalleſt advantage or effect.

Eleven epileptic patients, who came under my care nearly about the ſame time, were claſſed and treated in the following order:

Three patients took the argent. nitrat. gr. iv. ter in die.

Two took the cupr. ammon. the largeſt doſe, gr. viij ter die.

Two, pulv. cinchon. ℥iv. cupr. vitriol. gr. iiſs. M. quart. quaq. hor. That is, one ounce of bark, and fifteen grains of the cupr. vitr. daily.

Two took the pulv. valer. ſilv. ʒj. quart. quaq. hor. or one ounce daily.

Two took the arſen. alb. to the quantity of one grain and a half daily.

It is to be recollected, that the active medicines were adminiſtered in very reduced doſes at the commencement, and gradually increaſed till the quantity amounted to what is above ſpecified. One tenth of a grain of arſenic was at firſt exhibited every four hours, and augmented by regular gradation to one fourth of a grain; but beyond this it could not be carried. Half a grain of the cupr. vitriol. given every four hours, was the doſe commenced with, and increaſed to two grains and a half. Neither this or the preceding medicine could be puſhed farther, as the ſtomach became affected; and even the above quantities frequently occaſioned nauſea and vomitings, eſpecially when given on an empty ſtomach, the ſickneſs always recurring in the morning. This plan was perſevered in for ſix weeks, and the reſult was in all uniformly the ſame; that is, no amendment whatever took place.

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The argent. nitrat. was again tried on a patient lately under my care at the Royal Hospital, of which he took ten grains daily, with results precisely similar to those already mentioned. The paroxysms in four of them observed regular periods like intermittents of the tertian and quartan type, and those were ordered the cinchon. cupr. vitriol. arsen. alb. and occasionally large doses of opium. The recurrence of paroxysms in six of them, was usually more frequent and violent during the full and change of the moon; and one man in particular had rarely more than one fit, except at these periods, when he was sure to have a regular daily attack. Two others, who were subject to nasal hæmorrhagies and a tempory inflammation of the tunica conjunctiva of the eye, during the attack, had their heads shaved, blisters applied to the sutures, and leeches to the temples.

I observed in these patients, and in most others who have long laboured under this untoward disease, a dulness of apprehension, a particular stare and vacuum of countenance, a dilated pupil, and an inability of the iris to contract on the admission of light, accompanied with stupor and a general irritability of the muscular fibre. This torpor extends to the stomach and intestinal canal, as those people subject to the disorder usually require the most active cathartics and emetics to excite the primæ viæ into action.

I trust that these remarks will not be considered as reflecting on the ability or veracity of the respectable names already mentioned, nothing is indeed farther from my intention, their characters and talents are too well known to the medical world to need even this explanation; but every practitioner, however skilful and enlightened, is at times liable to error, especially when drawing conclusions from premises new and imperfectly understood. That the timid and feeble practice of these gentlemen in the treatment of epilepsy should have been successful, whilst the bold and decisive, but at the same time cautious practice of another, had entirely failed, is indeed to be wondered at; and will induce us to infer, that appearances with respect to the effects of the remedy, had, some how or other, certainly deceived them; for we cannot suppose, that medicines which had been exhibited in such large doses, whose use had been persevered in for a length of time, and which not only failed in performing a cure, but proved perfectly inert on every occasion, should have succeeded, when given in such minute and divided portions.

Our knowledge of the causes and cure of this frightful malady is, indeed, extremely limited, and little or no dependance can be placed on all the boasted medicines hitherto discovered

vered and recommended for it; but these difficulties ought not to suspend the efforts, or deaden the ardour of the humane and enlightened physician, they ought rather to stimulate him to greater exertions in the pursuit of new remedies, or in differently combining and applying those already known, in order to combat successfully a disease, which must at present be reckoned in the number of the opprobria medicinæ.

If these observations be deemed worthy a place in your valuable Journal, they are much at your service.—In my next Communication, I propose laying before you the farther results of my experiments on the Digitalis Purpurea, in the treatment and cure of Phthisis Pulmonalis. I am,

GENTLEMEN,

Your obedient humble servant,

Royal Hospital, Plymouth, October 4, 1800.

J. MAGENNIS, M.D.

Additional Case of Croup, successfully treated with Digitalis.

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

I Had the honour in June last, to transmit to you two cases of *Croup*, which I had successfully treated with Digitalis, and which you had the goodness to insert in No. XVII. of your useful Journal. The end I proposed to myself in sending them to you, was to call the attention of the profession to the powers which the Digitalis apparently possesses of arresting the dangerous symptoms of that dreadful disorder. It doubtless has occurred to many gentlemen, as it did to me, to make trial of it, upon the principle of its operating so quickly and powerfully upon the arterial system, and thereby stopping the rapid progress of the inflammatory symptoms. Considering the common fatality of the Croup, and the little command we have over it by the remedies hitherto usually employed, I cannot but wish that the following additional case of Croup I now send you, may be a means of promoting a trial of the Digitalis. So much has been written by ingenious men on the subject of Croup, that it is quite needless for me to enter particularly into it. The definition of it given by Dr. Cullen in his Synopsis,

Synopsis, is so truly characteristic, that it is scarcely possible for any person to mistake the disorder: the "vox rauca" and "tussis clangosa," will infallibly determine the real existence of Croup.

September 17, 1800, Elizabeth Clark, two years of age, was *suddenly* seized last night at eight o'clock with hoarseness and difficulty of breathing; both which symptoms are greatly increased this morning. She coughs with a barking noise; pulse very quick; belly natural.

Sumat tincturæ Digitalis, (secundum Dr. Maclean) gt. vj. 4tâ. quâque horâ.

18th. Has taken five doses of the drops; pulse not too frequent; dyspnœa and cough *entirely* gone. Sumat guttas omni 6tâ horâ.

19th. Took the drops regularly every six hours; had a slight return of dyspnœa and cough last night, which continued about an hour; slept well afterwards, and is this morning apparently well.

21st. Continues free from complaint.

If you think the above worthy a place in your Journal, I shall send you a faithful account of the result of any future trials I may have an opportunity of making of the Digitalis, as a remedy for the Croup; and beg leave to observe, that the three already sent, are the only cases of Croup which have fallen under my care, since it occurred to me to try the Digitalis.

The Vaccine Inoculation has been brought before the tribunal of the public with such a *weight* of evidence, that I think an *impartial* jury must give a verdict in its favour. It seems, therefore, quite superfluous to bring forward any more witnesses. Yet, as late experience has removed a doubt from my mind, which, probably, still lies as an objection against Cow-pox with many others, I think it my duty to state the following circumstance in favour of it, as I had *previously* an intention of communicating it to the public, had a *contrary* result taken place. About two months ago, I delivered the wife of Thomas W. a watch-maker in this town, of a girl, which I inoculated for the Small-pox about three weeks ago. Mrs. W. and two other young children, had been inoculated at Cheltenham, for the Cow-pox, by Dr. Jenner himself, about fourteen months ago, and afterwards for the *Small-pox*, which they told me did not take place in either of the three. Doubting whether time might not so far alter the constitution, at least of children, as to destroy the former good effects of Vaccine Inoculation, I inoculated them again with the infant. I am happy

to ſay, it totally failed in all *three*, although the infant, who was inoculated with the ſame matter, ſickened, and had an unuſual number of puſtules. I am,

Your's, &c.

Kidderminſter, October 12, 1800. G. CUSTANCE.

Dr. DOMEIER, *on the Appearance of the Tongue.*

"*Is a furred tongue a ſign of a foul ſtomach?*"

IN examining the hiſtory of medicine, it will not eſcape our attention, that one of the ſtrongeſt reaſons which retarded its progreſs, was our ſwearing in verba magiſtri. Whatever part, eſpecially in the practice of medicine, we conſider, we find this confirmed. We order bleedings, emetics, purging draughts, yea whole claſſes of the materia medica, not with any ſatisfactory reaſon adapted to the animal œconomy, but becauſe authors of a great name have recommended them; and we pervert faith (certainly a great Chriſtian virtue) by applying it to a ſcience where it ceaſes to be one.

I ſhall at this time endeavour to ſhew, in a few lines, that we miſunderſtand one of the moſt common appearances, and that it leads us, in conſequence, to a wrong mode of practice, I mean *a foul tongue*. It is adopted nearly as an axiom in the ſchools, that a loaded tongue indicates a foul ſtomach, and it is therefore no longer matter of enquiry whether this concluſion is true or not. Notwithſtanding the prevalence of the opinion, I hope to ſhew its error.

Suppoſing the ſtomach overloaden even with its own corrupted juices, or with matters taken in by the mouth, could it happen, againſt the laws of gravity, that ſome particles of them could aſcend, to depoſit themſelves upon the tongue, ſuppoſe to ſhew us, that the ſtomach contained corrupted or more matter only than it ſhould do? Certainly not.

Suppoſing the laws of gravity had ſuffered an alteration in favour of phyſicians and apothecaries, to give them occaſion to adminiſter their tartariſed antimony, how ſhould theſe matters eſcape the ſtomach, becauſe it is well known that the mouth of the ſtomach is always cloſely ſhut, and that for this reaſon we cannot even diſcharge air without a great effort; though air ſhould find its way eaſier than the black viſcous ſtuff we often remark upon the tongue.

We find our tongue clean after dinner, and unclean when we

we awake, and when our ſtomach is quite empty, and in ſo ſound a ſtate that we feel hungry, and order our breakfaſts. The ſtate of a ſtomach overcharged with victuals, or containing corrupted juices, cannot laſt ſo long as we often remark a foul tongue to continue. The acrimony of the matter would increaſe, irritate the ſtomach, and cauſe vomiting, or find its way downwards.

Another error generally entertained by the public, and too often by practitioners, confirms the one I am ſpeaking of. As ſoon as they ſee an unclean tongue, an emetic is pronounced unqueſtionably neceſſary. They adminiſter it, and with the ſecond or third vomiting always comes forth ſome bile, and ought to come, of whatever conſtitution the patient may be, provided his biliary duct is not obſtructed by calculas. Now they conclude, often out of ignorance, often out of quackery, the beneficial effects the emetic has produced! From what violent diſeaſes it has ſaved the patient!

And to what practitioner has it not happened to obſerve ſpontaneous vomiting very frequent, eſpecially in this ſeaſon of the year, ſoon after the great heat, of green bile, and ſo corrupted that it corrodes the ſauces, and feels acrid in the mouth, while the tongue is as clean as poſſibly it can be. I have had an opportunity of obſerving this, within theſe few days, in a boy of eleven years old, ſon of a French emigrant, who had a fever, accompanied with head-ach, loſs of appetite, and pains, with great uneaſineſs, in the region of the ſtomach, &c. *but a red, clean, humid tongue.* I preſcribed for him an emetic, and he vomited immediately *green*, acrid bile, after which he recovered. His tongue was, before, during, and after the indiſpoſition, of a true bilious kind, always in the ſame ſtate.

It ſeems, upon the whole, that we accuſe the bowels too often as a cauſe of many indiſpoſitions, becauſe we do not endeavour to find any other.

The paſſage being always ſo largely open, and few cauſes exiſt which may obſtruct it, it ſeems not likely that crudities could be ſo often accumulated as we ſuſpect them; and I think, that the unſatisfactory conſequences of our too frequent purging draughts would inform us of the error, if the majority of practitioners believed leſs in authorities, and accuſtomed themſelves more to make obſervations.

Thus, I believe that I have proved, a priori, that the ſymptom of an unclean or furred tongue, never *can* proceed from a foul ſtomach only; and it has the more weight, as it is confirmed by diſſection.

Having lived in Italy for ſeveral years, I have often taken the advantage of the facility of diſſecting bodies in that coun-

try; and putrid fever being one of the moſt common cauſes of death in Italy, eſpecially during the five hot months, I have laid open the ſtomach and bowels of a great number who died with a furred, even with a black tongue, but never found any crudities in them.

I commonly knew the remedies they had taken during their illneſs, and it ſeldom is the practice in Italy to give an emetic or purging draught in that diſeaſe; but in both caſes I found the inteſtinal canal clear.

Theſe reaſons ſhew clearly that it is impoſſible a foul tongue ſhould ſhew the ſtate of the ſtomach.

There muſt therefore be another ſource for this ſymptom, which is ſo frequently remarked, and this, in my opinion, is twofold, namely:

It is either,

1. A precipitation from the ſaliva; or,
2. An effect of increaſed evaporation.

If it proceeds from the decompoſition of the ſaliva, then our food becomes bitter to the palate, for the ſenſe of taſte does not perceive it till diſſolved; or they have ſome particular taſte, which in a natural ſtate of that fluid they ſhould not have: In ſhort, the ſpittle comes then nearer its corrupted ſtate than it ſhould do in a ſound perſon.

If it proceeds from a precipitation of the breath, then this will be in general offenſive, from being loaden with heterogenous matter, which, by its paſſage through the mouth, is in part precipitated upon the tongue, gums, and teeth. In this caſe it is a ſign of the ſtate of the blood, and of the functions of the lungs.

It is certainly very neceſſary for the progreſs of the healing art, to doubt ſometimes what the ſchools of phyſic, during centuries, have acknowledged as facts, to abandon nonſenſe, and to ſeek the truth.*

London, Sept. 1800. W. DOMEIER.

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* The ſentiments and reaſoning of this Correſpondent, about ſixty years ago, would have procured him fame; at preſent the Humorial Pathology of Boerhaave is become obſolete in this country. The appearance of the tongue, however, is a circumſtance of ſo much importance, that we wiſhed to call the attention of our Correſpondents to the ſubject, and have therefore admitted the paper.——EDIT.

To Dr. PEARSON.

Dear Sir,

I Should have anſwered your polite letter (incloſing the Vaccine matter) ſooner, but waited in the hope of collecting farther information with reſpect to the traditional and popular knowledge of the Cow-pock. My reſearches have been hitherto confined to a ſmall portion of the weſtern part of this country, where I have met with thirteen inſtances of people who had gone through the Cow-pock, and were afterwards exempt from the Small-pox. With regard to the ſuppoſed origin of the diſeaſe, it was never ſuſpected in this country *to be derived from the grease of the horse's heel*: Indeed, the bare proof of the exiſtence of the Cow-pock in this country, ſeems to me a ſufficient refutation of the only hypothetical part of an inveſtigation conducted with uncommon ingenuity, and completely ſatisfactory in the principal objects for which it was undertaken, viz. the ſuperior mildneſs of the Cow-pock, and its power of deſtroying the ſuſceptibility of the conſtitution to the Small-pox. Women alone are employed in milking cows in this country; in this office men never interfere, as they would think themſelves diſgraced by engaging in any rural occupation, in which the other ſex are uſually employed.

I now proceed to relate ſome of the caſes, deferring any further remarks until a few of theſe are detailed.

Cornelius Creedon, æt. 60, (a labourer in the employment of Samuel Townſhend, Eſq. Firmount) ſeveral years ago ſlept with a cow-boy, who took the Shinach, (Cow-pock) from handling the teats of cows affected with it. He had ſhivering, general uneaſineſs, and ſickneſs at the ſtomach, which ſubſided on the appearance of an eruption in his neck, breaſt, and arms; the auxillary glands were ſwelled and very painful. In ten years after he was inoculated with the Small-pox, and has ſince, during three ſucceſſive inoculations of this diſeaſe in his family, handled and nurſed his children without the leaſt effect. He, as well as his entire neighbourhood, attributed his eſcape to his previouſly having had the Cow-pock. The cow-boy, as far as he recollects, got the diſeaſe from rubbing the ſore teats of the cows with ſome application, which he believes to have been burnt butter: is ſure it was from the cow-boy he was infected, as he did not himſelf handle the cows. His ſiſter had the diſorder at the ſame time, and has been ſince alſo inoculated, without taking the ſmall-pox.

Ellen Goggin, (wife to a tenant of Mr. Townſhend) ſeventeen

teen years ago, after previous ſickneſs at ſtomach, and ſymptoms of general fever, had a copious eruption of Cow-pock on her hands. The cows were much afflicted with it at the time, and their milk was in conſequence much leſſened. The ſickneſs ſhe deſcribes as being more ſevere than any ſhe had ever experienced; but ſhe was greatly relieved by the eruption. By frequent handling, ſhe communicated the diſeaſe to an infant whom ſhe was ſuckling; but the eruption, though copious, did not ſuppurate, and ſhe could not obſerve any ſigns of general diſturbance in him. In two years after, this boy and a younger brother were inoculated for the Small-pox; they lay together during the progreſs of the diſeaſe; his brother ſhewed a great quantity of Small-pock, but he had no ſign of it either at the arm or elſewhere. Three more of the family were lately inoculated, with one of whom he ſlept, though he had the Small-pox, which, however, he did not take. During theſe inoculations, the mother conſtantly attended the children, and handled them daily, without taking the Small-pox. She attributes her own eſcape, as well as that of her ſon, to their having had the Cow-pock, as above related, and has often heard and ſeen inſtances of ſimilar exemption produced by this diſeaſe.

Can it be inferred from theſe cauſes, that the diſeaſe is infectious in its natural ſtate? In the inſtance of Goggin, it is eaſy to conceive, that the woman might have handled the child with her hands covered with fluid matter from the cows' teats. May not the ſuperior violence of the diſeaſe render it communicable by contact in its natural ſtate? In the inoculated Cow-pock I can determine this point, if it were not ſufficiently proved already. I inoculated fifty children, not above twenty of whom ſhewed the marks of infection at the arm at the uſual period. The infected children continued to ſleep with the uninfected as uſual; yet, not one of the latter took the diſorder, which I was forced to communicate to them by a ſecond inoculation.

Johanna Sullivan, æt. 50, (cook-maid at Dr. Richard Walſh's of this city) when ſhe was 13 years of age, was brought with a number of other children to a dairy, for the purpoſe of being infected with a diſorder of cows called the Shinach, which, by the general belief of the neighbours, would ſecure for ever ſuch as took it from the Small-pox. She and the other children were made to ſqueeze the cows' teats till their hands and fingers were covered with the fluid matter of the diſorder. She recollects that a number of the children did not take the diſeaſe; ſhe, however, had one pimple on her hand, which inflamed and ſuppurated. When ſhe was twenty years of age

ſhe

ſhe was twice inoculated by Mr. Godwin, an apothecary at Bantry, without effect; but on hearing from her mother that ſhe had the diſeaſe above-mentioned, he declined inoculating her a third time, alleging that there was not the ſmalleſt danger of ever taking the Small-pox, as he could aver from experience. She has ſince reſided in Cork, where ſhe was frequently expoſed to Small-pox, particularly about eleven years ago, when the grand-children of the late Mr. Attiwell Hayes, with whom ſhe then reſided, were inoculated. In order, as ſhe ſaid, to *be ſure of herſelf*, ſhe lay with the children four nights in the height of the eruption, but did not take the diſeaſe. As my letter is already of unconſcionable length, I ſhall conclude my account of the natural Cow-pock with the following extract of a letter from a lady of reſpectable connections; ſome of whom had experienced the Cow-pock in early life. This communication is worthy of attention, no leſs from the nature of the information, than from the authority from whence it is derived.

—— "It is thirty years ſince my mother had the Cow-pock. She recollects having had two pimples on one hand, which were much inflamed, and afterwards went on to ſuppuration. She has been inoculated frequently ſince, and expoſed to the infection of Small-pox in various ways, without taking it, which has been attributed to her having had the Cow-pock, univerſally known among our farmers by the name of Shinach. I was laſt night ſpeaking to my grand-mother on the ſubject. She had the Cow-pock fifty years ago. Her account agrees with my mother's. She had the eruption on one hand, and, ſhe ſays, ſhe never in her life experienced ſo much pain as while the inflammation laſted. She has never been inoculated, but was very often expoſed to the Small-pox without taking it. At the time ſhe had the diſeaſe, there was ſcarcely a Spring that the cows were not affected with it; and it was ſo univerſally believed that thoſe who took it were ever after exempted from the Small-pox, that people expoſed themſelves as much as poſſible to it. My grand-mother, who is above eighty years old, ſays, that the ſame opinion always prevailed in this country."

Other accounts agree, that the diſtemper is not near ſo frequent as it was forty or fifty years ago. It appeared, however, in this neighbourhood laſt month, but declined before I had an opportunity of ſeeing it. In one part of the country, where there are no traces of it except in the memories of ſome very old people, they account for its diſappearance in the following manner: They aſſert, that it was firſt produced by the bite of a certain inſect, the breed of which has been now deſtroyed

ſtroyed by the *frogs*, which are known to be of foreign origin, and, on this account, retain their Engliſh name. I mention this, to ſhew that the Iriſh are not wanting in conjecture on the origin of the diſtemper as well as the Engliſh. This opinion of the diſeaſe, however, is not general.

The Iriſh name of the diſeaſe (Shinach) belongs to the old written language of the country, and has no relation to the modern colloquial dialect; this I conſider a ſtrong proof of the antiquity of the diſtemper. It is evident from the facts I have ſtated, and from the remainder which I have myſelf collected, or received from friends, that the belief of the anti-variolous power of the diſeaſe is as ancient as that of the exiſtence of the diſeaſe itſelf. That this power is not *fugitive* but *permanent*, all theſe caſes fully prove; and thus an argument againſt the new inoculation, which has been uſed in this city as well as in England, receives a ſatisfactory anſwer.

In all the caſes I have met with, the fever preceded the eruption, and was relieved by it.

I received ſome vaccine infection from Dr. Bradley, previous to my having received your letter, as I have acknowledged in a communication to the Phyſical Journal. With the thread received from him, I was ſucceſsful in procuring an abundance of infection. I gave your thread to my friend Dr. Sugrue, who had equal ſucceſs. He has extended the inoculation to 50 children. The number I have inoculated amounts to 250, not above three of whom had eruptions, which diſappeared without ſuppurating. I have not inoculated above twelve with the Small-pox, the lower order having ſome ſuperſtitious notions, which prevent them from agreeing to a ſecond inoculation. I ſelected five of theſe, from their not having exhibited the leaſt appearance of conſtitutional fever, though the progreſſive ſtate of the puncture at the arm had been exactly ſimilar to the other caſes. Two of the five were adults, and therefore capable of deſcribing any ſymptoms they might have experienced. The matter I uſed was freſh taken from a child covered with variolous eruption in a ſtate of ſuppuration. The punctures, after looking inflamed for three or four days, withered without forming a puſtule. Hence I would infer, that it is the ſtate of the arm alone we ſhould regard, particularly as fever is produced in children often from the ſlighteſt cauſes. I have the pleaſure to acquaint you that moſt of the Phyſicians of reſpectability in this city are fully convinced of the efficacy of the Cow-pock. I have ſupplied many of them with infection; among others, Dr. Longfield, who has inoculated his only grand-child, the infant ſon of Mr. Leſlie, the banker. From Dr. Longfield's age, the reſpectable rank he holds in his profeſſion,

profeſſion, and his love of ſcience, his example muſt have great weight with the public. To remove ſome objections which have been advanced againſt the inoculation, and, if poſſible, to extend its benefits as widely as poſſible, I have it in contemplation to addreſs the public in a ſmall pamphlet in a popular ſtyle. This ſeems neceſſary, as very few of the original works on the ſubject have yet reached this country, and therefore objections, however weak, muſt have their effect when they remain unanſwered. By this means I ſhall alſo, I truſt, be enabled to collect more numerous facts on the natural Cow-pock. If you have any new information on the ſubject, I ſhould be obliged by the communication of it. If you have no particular uſe for the information I tranſmit you, I ſhall thank you to ſend it to Dr. Bradley for publication, if he thinks proper. With him I beg you will accept of my acknowledgments for the inſection, which promiſes incalculable benefits to this part of Ireland. I remain, dear Sir,

Your ſincere humble ſervant,

Cork, Oct. 16, 1800. JOHN W. BARRY.

P. S. Dr. O'Leary, your late pupil, is arrived, and informed me of your wiſh to hear from me, which induced me to write ſooner than I intended.

To Dr. BATTY.

DEAR SIR,

IF it ſuit your convenience, pray inſert the incloſed Reſolutions of the Directors of the York Diſpenſary in the next Number of your Journal. I alſo ſend you two letters that preceded the meeting at the Diſpenſary, which you may diſpoſe of as you think proper; they will ſhew you, that we are not totally negligent of the welfare of our fellow-citizens, though ſo far remote from the centre of animation.

I am your affectionate friend,

York, Oct. 13, 1800. R. CAPPE.

YORK DISPENSARY.

At a meeting of the Directors of the York Diſpenſary, held at the Merchants' Hall, in Foſsgate, on Thurſday, October 9, 1800, (Mr. ALDERMAN WILSON in the Chair,)

Reſolved,

1. That it appears, from the opinion of many of the moſt experienced medical men, that a General Inoculation for the

Cow-Pox throughout the island of Great Britain and Ireland, would nearly effect the extinction of the casual Small-Pox, and consequently be the means of annually saving the lives of upwards of 45,000 children and grown persons.

2. That the Physicians and Surgeons belonging to the Dispensary be requested to form themselves into a society, for the purpose of inoculating all such persons as may present themselves for Inoculation for the Cow-Pox; and that the Society, so formed, do invite into their body such Physicians, Surgeons, and Apothecaries as may be resident in York, and who, in their opinion, may promote the objects of that Society.

3. That the Physicians and Surgeons of the Dispensary be desired to supply the country practitioners with Matter, when requested, it being found, from unquestionable authority, that it does not lose its active powers by being transported to the distance of several hundred miles.

4. That the Directors shall use their utmost endeavours to encourage Inoculation for the Cow-Pox in all the neighbouring villages, as an auxiliary means of preventing the introduction of the casual Small-Pox into this City.

5. That a public Subscription be solicited, for the purpose of defraying the expence that may be incurred by this new Institution; and that the same be applied by the Directors of the Dispensary in such a way as they may deem most likely to further the objects thereof.

6. That this plan shall be carried into execution with all convenient speed, with a view to obviate the dreadful effects of the casual Small-Pox, which at this time are attended with considerable mortality in many parts of the country.

7. That the Resolutions and Regulations of this Meeting be sent to all the Clergymen in York, and the neighbouring villages, with request of the Meeting, that they will communicate the same to their parishioners, pointing out the advantages attending the Inoculation for the Cow-Pox in any way they judge most likely to forward the views of this Meeting.

8. That the Medical Gentlemen of the Dispensary be requested to draw up and print such Rules for the use of the poor, as may be necessary to regulate their conduct and attendance on the Dispensary during the period of Inoculation for the Cow-Pox.

9. That Books be opened at both the York Banks, where the smallest sums will be received, in support of a plan that has for its object the extinction of the casual Small-Pox from this city and neighbourhood; it being a fact, supported on the best authority, that a body once made the subject of the Cow-Pox, is rendered incapable of receiving the infection of the Small-Pox.

10. That

10. That the Reſolutions of this Meeting be ſigned by the Chairman, be printed for general diſtribution, and publiſhed in the three York Papers.

11. That the Thanks of this Meeting be given to the Chairman, for his great attention in conducting the buſineſs of the day.

THOMAS WILSON, Chairman.

To the EDITOR of the YORK HERALD.

Sir,

IT is known probably already to many of your readers, that more than two years ago Dr. JENNER, a phyſician of long experience and high reputation in Glouceſterſhire, publiſhed a deſcription of a diſorder, much leſs ſevere than the Small-pox, which renders the human body permanently ſecure againſt the ſmall-pox contagion. The fact was known many years ago, in ſome parts of the iſland, among thoſe who had received the diſeaſe caſually; was long the object of Dr. Jenner's attention; and, ſince his firſt publication, has been verified by the obſervation of many eminent phyſicians and ſurgeons in London, and different parts of the country, and by many gentlemen not engaged in the profeſſion of medicine. The diſeaſe has alſo been tranſplanted to the Continent with the ſame good effect; and has been received by ſome of the firſt families in this kingdom. In London, an Inſtitution for the inoculation of it has been eſtabliſhed, the care of which is committed to Dr. Pearſon,* to whoſe active zeal the world is indebted for much of the early and far-extended intelligence reſpecting this diſcovery.

The progreſs of the obſervations on this diſeaſe, I have watched with much jealous attention; but at length my doubts have been removed, by evidence of the utmoſt credibility: and having found Mr. Edward Wallis of the ſame ſentiments as myſelf, I have lately, with his obliging aſſiſtance, inoculated ſome children in this city with the newly diſcovered diſeaſe; the firſt, I believe, who have undergone the operation here. We have found the diſeaſe in every reſpect correſpond with accounts already publiſhed; and, indeed, as a friend of mine, an eminent ſurgeon in London, expreſſed himſelf in a letter to

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* The medical eſtabliſhment of this inſtitution has lately been increaſed; there are now three phyſicians and three ſurgeons, beſides conſulting ſurgeons and viſiting apothecaries.

me a few days ſince, "we have not ſeen any indiſpoſition attend it worthy of notice."

To ſhow the advantages which the new inoculation promiſes, I will ſtate conciſely the peculiarities of the ſmall-pox and of this diſeaſe.

The ſmall-pox are communicated through the air; and the contagion attaching itſelf to clothes, merchandize, and letters, is ſpread over a vaſt extent of country, and is ſometimes conveyed acroſs the ſea to diſtant kingdoms. The ſmall-pox were brought from the Eaſt to Europe; they were in Britain probably before the birth of Mahommed. The Europeans have ſince ſpread this dreadful diſorder from the Equator to the Pole. The Danes carried it to Greenland; the Spaniards poured its ravages, more terrible than their arms, through the unhappy country of Peru: in the ſingle province of Quito, 100,000 perſons died of the ſmall-pox when they firſt appeared in that country.

The ſmall-pox are now, it is true, a much leſs dreadful diſtemper than formerly. The improved medical treatment has rendered the caſual or natural ſmall-pox much more mild; and inoculation ſtill farther diveſts this diſeaſe of its terrors. Still, however, ſome die of ſmall-pox in all ſeaſons, and in ſome ſeaſons many. From the London Bills of Mortality, it appears that the ſmall-pox have, upon an average, annually deſtroyed more than 2020 perſons during ſeventy-five years, ending at 1777; the total amount is 151,570. Since that date I have not the bills before me; but in 1798, 2237 died of ſmall-pox, and in 1799, 1111. The deſtruction made by ſmall-pox is probably ſtill more dreadful, ſince thoſe bills do not include the deaths of perſons buried out of London, or in grounds not belonging to the Eſtabliſhed Church; nor do they include the two populous pariſhes of Pancras and Mary-le-Bonne, in which the annual burials for ten years, ending in 1742, were 1041.* Still the number of deaths from ſmall-pox in London, great as it is, probably bears a leſs proportion to the deaths occaſioned by ſmall-pox through the whole iſland, than the population of London bears to the population of the whole iſland.—For, by the Bills of Mortality, it appears, that one fourth of all the deaths in London is of ſtrangers; who, it is diſcovered from the ſame ſource, do not fix in London till the age of 18 or 20; and therefore among the new ſettlers, it is probable, there are few who have not had the ſmall-pox previous to their arrival in London;—and many children born in London, have

* The Small-pox Hoſpital and the Foundling are in theſe Pariſhes.

have the ſmall-pox in the country.* The very *means* that ſave the lives of many who have this diſeaſe, increaſe the number of thoſe who receive it; and it is now annually fatal to a greater number of perſons than before the improvement in the treatment of it; and the increaſe of deaths is not merely in proportion to the increaſe of population. Free admiſſion to the open air, though neceſſary for the ſick, expoſes thoſe who have not had the diſeaſe, not merely to the chance, but almoſt to the certainty of taking the infection. Very few of the inhabitants of this iſland now eſcape it.

The ſmall-pox are ſevere and dangerous in proportion to the number of puſtules; and of 1000 perſons, inoculated for that diſeaſe, generally more than 800 have puſtules. The ſmall-pox are peculiarly dangerous to infants and very young children, and women in pregnancy, who very rarely eſcape abortion when they receive this diſeaſe caſually. "The natural ſmall-pox in pregnant women is fatal in at leaſt nineteen out of twenty caſes to the fœtus in the womb, and to three-fourths or four-fifths of the women:"† and of thoſe pregnant women, whom perſonal ſafety has compelled to ſubmit to inoculation, many have loſt their own lives, and very few have borne living children.

The newly diſcovered diſeaſe has been diſtinguiſhed by the name of *Cow-pox* or *Vaccine-pox*, having been originally obſerved on the teats of cows, in ſome of our dairy counties. It is never communicated but by contact, and then only when the fluid matter lies on the broken ſkin.

Many women in pregnancy have paſſed through this diſeaſe, and none have ſuffered from it.

Inſtead of being peculiarly dangerous to young infants, it ſeems often to be peculiarly mild in them.

The diſorder is attended with very ſlight fever, which ſeldom laſts longer than a few hours. In ſome inſtances eruptions have appeared; but they had a very different courſe from thoſe of the ſmall-pox, ſeldom coming to ſuppuration, and leaving no marks on the ſkin. And even in thoſe inſtances in which an eruption at all reſembling the ſmall-pox has appeared, it is now the opinion of medical gentlemen, moſt experienced in the diſeaſe, that it has ariſen from expoſure to the effluvia of ſmall-pox.

The vaccine-pox are communicated by a ſcratch as ſlight as

* By an Act of Parliament paſſed in the year 1767, which we owe to the humanity of Mr. Hanway, all pariſh infants are ſent in three weeks after birth, into the country, to be nurſed for ſix years.

† Med. Commentaries, 1794.

as that uſed for inoculating the ſmall-pox; but the diſeaſe is ſo little infectious, that it is ſometimes neceſſary to make repeated attempts before the inoculation ſucceeds. Around the ſcratch a watery veſicle is formed, and an eryſipelatous redneſs ſoon ſurrounds the whole. This ſometimes ſpreads extenſively, but with little inconvenience; and, when properly managed, it is eaſily checked. The redneſs abates, and a hardneſs leſs extenſive ſucceeds. The veſicle becomes dry, a cruſt is formed over it, and the whole gradually heals. In ſome inſtances the cruſt ſeparates, and leaves a ſpot unhealed like that of an iſſue. In ſome of the earlier inoculations, theſe ſore places became troubleſome; but, at that time the proper treatment of the inoculated part was not diſcovered. There is generally a ſlight ſwelling in the armpit, but it ſoon ſubſides without requiring medicinal applications.

I will only add the reſult of the obſervations of a ſingle phyſician, with which thoſe of others perfectly coincide. Dr. Woodville, whoſe attendance on the Small-pox Hoſpital of London qualifies him peculiarly as a judge of the comparative ſeverity of the two diſeaſes, expreſſes himſelf much in favour of that recently diſcovered. "I have no doubt, that the inoculated cow-pox is as much milder than the inoculated ſmall-pox, as the latter diſeaſe is milder than the caſual ſmall-pox: nay, it ſeems to me, from the very benign form in which the vaccine-pock has of late invariably appeared, that it may be conſidered as a diſeaſe perfectly harmleſs in its effects."*—— The cow-pox are not hitherto known certainly to have been fatal in any inſtance. A little infant, under Dr. Woodville's care, died in convulſions on the ſeventh day after it was inoculated with vaccine matter; but convulſions frequently occur in infants, and are frequently fatal.

Dr. Woodville had, ſeveral months ago, inoculated 1000 people with the ſmall-pox, who had previouſly had the inoculated cow-pox; not one of them received the infection. Many elderly people, who had received the cow-pox caſually, were inoculated for the ſmall-pox after many years, one at the diſtance of 53 years, but did not receive the infection. From Dr. Jenner's firſt pamphlet, and a letter lately publiſhed, addreſſed to him by Wm. Fermor, Eſq. I have made the following liſt of perſons, who had had the cow-pox many years before, and did not receive the ſmall-pox on inoculation. Many were often expoſed to them in their own families when epidemic.

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* Woodville's Obſervations on the Cow-pox, page 30. Publiſhed July 15, 1800.

From

From Dr. JENNER.	
Joſeph Merret - - -	25
Sarah Portlock - - -	27
John Phillips - - -	53
Mary Barge - - - -	31
Elizabeth Wynne - -	38
William Stinchcomb -	10
Heſter Walkley - -	26
From Mr. FERMOR.	
William Tredwell - -	3
Alban Collingridge - -	4
Mr. Stevens * - - -	4
Thomas Slater - - -	6
Mr. H. Collingridge -	10

The interval of years between the infection of cow-pox and inoculation of ſmall-pox.

* He nurſed his own family in the natural ſmall-pox with impunity, 27 years after having had the cow-pox.

Many ſimilar facts have been publiſhed by Dr. Pearſon, and other writers on the cow-pox, but it ſeems unneceſſary to adduce them, ſince only one perſon in twenty, according to the higheſt ſtatement, is by natural conſtitution incapable of receiving the ſmall-pox. Of theſe twelve, therefore, none ought from this cauſe to have eſcaped the infection; and there are ſo many millions of chances to one, that all could not eſcape, that it may be eſteemed practically impoſſible. The ſecurity againſt the ſmall-pox was therefore derived from the cow-pox, taken, in moſt of theſe inſtances, early in life. Dr. Woodville has not found thoſe perſons incapable of receiving the ſmall-pox, to exceed the proportion of one in ſixty, and they are equally exempt from the cow-pox.

Is it preſuming too much from theſe facts to believe that a perſon who has had the cow-pox, will remain for ever ſecure againſt the ſmall-pox?

If the cow-pox ever eradicate the ſmall-pox, this cannot happen till ſome very diſtant period. The Chineſe, it is to be feared, will long cheriſh this enemy to mankind with their indiſcriminate prejudice in favour of old habits. The immediate advantages it offers are the following: When the ſmall-pox are epidemic, (and in towns they are annually epidemic) young infants and pregnant women may be protected againſt a diſeaſe to them peculiarly dangerous, by one not at all unfriendly to them.

One perſon in a family may be ſecured againſt the ſmall-pox, by inoculation for the cow-pox, without danger to others, when peculiar circumſtances render it improper to inoculate the whole family;

family; but the ſmall-pox cannot be given to one, without danger to all in that family who have not had them.

The cow-pox too, in proportion as it is a milder diſeaſe than the inoculated ſmall-pox, will, on that account, more extenſively than common inoculation, diminiſh the fatality of caſual ſmall-pox. But the new inoculation will in a far greater proportion prevent the ravages of caſual ſmall-pox, ſince common inoculation is ſometimes, in towns, undoubtedly the ſource whence ſmall-pox are ſpread among the people.

Inoculation for the vaccine-pox ſhould be made early in life; for if it be deferred till the ſmall-pox become epidemic, it is not always a certain preſervative. Some people, who had been previouſly expoſed to the contagion of ſmall-pox, had that diſeaſe, though inoculated with vaccine-matter, before any ſymptom of illneſs had appeared. Sometimes, however, the reſult has been more favourable.——The inoculation ſhould be made with the leaſt ſcratch that may be effectual, as the ſize of the ſucceeding veſicle depends much on the ſize of the ſcratch; and the ſmaller the veſicle, the more ſpeedy is the healing proceſs. The matter for future inoculation ſhould be taken in its moſt limpid ſtate: it has generally been found ſucceſsful when taken about the eighth day.

We have reaſon to be infinitely thankful to Providence for the means, now put into our power, of immediately checking the ravages of one of the moſt fatal plagues; and for the cheering hope of entirely exterminating that ſcourge from the face of the earth. With theſe ſentiments I feel it not leſs than a duty to lend my aid in ſpreading around the knowledge of the advantages which the vaccine inoculation offers us.

I am, Sir, yours, &c.

York, Sept. 5, 1800. ROBERT CAPPE.

To the EDITOR of the YORK HERALD.

Sir,

THE following Communication I have deferred for ſome weeks, from the hope of attaining more accurate information reſpecting the mortality of ſmall-pox in this city.

In a former letter which appeared in your paper on the 6th of September, intended as an introduction to this, I ſtated that the average of deaths from ſmall-pox, for ſeventy-five years, within the bills of mortality of London, had annually exceeded 2020. If the population within the bills of mortality may be ſtated at 1,000,000, which is probably not far from the truth, the

the proportion is one death from ſmall-pox in every 500 inhabitants. I remarked, that there is reaſon to believe that the mortality from ſmall-pox, through the whole iſland, is not in leſs proportion to the population: it probably far exceeds this eſtimate. The inhabitants of Mancheſter, Liverpool, and Cheſter, were enumerated in the year 1773, the total amount was 78,271, and the annual deaths from ſmall-pox, on an average, were 381; * therefore one perſon died of this diſeaſe, every year, in 205 $\frac{166}{381}$ of the inhabitants. The cauſe of this difference of mortality from ſmall-pox, in London and theſe towns, is in part to be explained by the number of new ſettlers in London. To obviate all doubt of exceeding the truth, in my former letter I ſtated the deaths of emigrants from the country as only one-fourth of all deaths in the bills of mortality; but, in fact, they have fallen little ſhort of one-third. † There are no means of obtaining an accurate eſtimate of the mortality from ſmall-pox in a town, the population of which is, in part, ſupported by emigration from the country; but the neareſt approach to the truth is made by comparing the deaths from ſmall-pox with the births. This method even is ſubject to the error of giving too ſmall a proportion, from the removal of children into the country before they undergo the ſmall-pox. In London there is one death from this diſeaſe in each 6 $\frac{1}{2}$ ‡ of all births; in Liverpool, one in 5 $\frac{1}{2}$ ‖. I have not been able to aſcertain the mortality of ſmall-pox in this city, for the diſeaſes are not mentioned in many of the regiſters of burials; but from the moſt accurate information I have obtained, it is probable that the deaths from ſmall-pox have, many years, born a greater proportion to the number of inhabitants than in London. If they were equal, the annual deaths from this diſeaſe would probably be about 32: but I have, with little trouble, collected the names of twenty-one children who have died within the laſt three months of ſmall-pox; and a more ſtrict inquiry, I fear, might much increaſe the liſt.

" The general diffuſion of the ſmall-pox affords a popular

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* Haygarth's Sketch of a Plan to exterminate the caſual Small-Pox, vol. 1, p. 142.

† Price's Obſervations on Reverſionary Payments, vol. 1, p. 340, 5th edition.

‡ The annual medium of regiſtered births in London for five years to 1768, was 16,291. Price's Reverſ. Paym. vol. ii. p. 345. " The number of thoſe who died of ſmall-pox in the laſt four years, on an average, is 2544." Dinſdale's Thoughts on General and Partial Inoculation, p. 44, publiſhed 1776. The proportion at preſent is probably not very different.

‖ Dr. Dobſon, quoted by Dr. Haygarth, Sketch, vol. i. p. 140.

prejudice that no civil regulation can control its progreſs; but authentic proofs of its extermination from Rhode Iſland, New England, and St. Helena, being produced, no great effort of wiſdom is required to conclude, that, by the like methods, it might be exterminated from Great Britain."§ And we have an example before us, in the boſom of our own country. A ſociety was formed at Cheſter, in the year 1778, on the ſuggeſtion of Dr. Haygarth, for checking the mortality of ſmall-pox, and for entirely excluding them as an epidemic diſeaſe. The efforts of this ſociety had the moſt happy ſucceſs; and its experience proved, that the ſmall-pox may be prevented raging among the people, in any country, by a few ſimple rules, and at little expence. The Cheſter plan required a periodical general inoculation for ſmall-pox. This was attended with ſome difficulty; and as the period for inoculation, on the whole, moſt to be preferred, was every ſecond year, there were occaſional deviations from the rule, attended with ſome danger of rendering the ſmall-pox epidemic in the town. And ſome perſons could not be prevailed on to receive by inoculation, a diſeaſe which, in the moſt favourable circumſtances, is not without danger, and might prove fatal. Theſe obſtacles to the accompliſhment of a purpoſe ſo much to be deſired, are now happily removed by the diſcovery of the cow-pox, a diſeaſe in its nature mild, not contagious; ſeldom attended with any ſickneſs, never with danger, and affording permanent ſecurity againſt the contagion of ſmall-pox. The preſent time, therefore, is incomparably more favourable for the execution of ſuch a plan, than the period when it was adopted with ſucceſs at Cheſter. No reſtraint need be impoſed reſpecting the ſeaſons of inoculating for the cow-pox, and a general inoculation, tho' on ſome accounts deſirable, may not be abſolutely neceſſary.

The ſmall-pox are chiefly deſtructive to the poor; the rich, for the moſt part, ſecure their children from the caſual ſmall-pox by inoculation: but this is done at the riſk of their leſs intelligent neighbours. Thus an operation, which confers an invaluable bleſſing on the few intelligent individuals who adopt it, becomes injurious to the leſs intelligent part of the community. Humanity calls aloud on us to ſubſtitute a diſeaſe that brings ſecurity to thoſe who ſeek it, and ſpreads danger to none. The poor need no inducement to adopt the cow-pox; the choice is now theirs, whether they will ſecure to their family life and health, or leave their children the prey of a loathſome and deſtructive plague, from the dreadful conſequences of which

§ Haygarth, Vol. i. p. 164.

which death would often, to the laborious poor, be a desirable release.

This city, remarkable for its liberal support of all works of public utility, would probably abundantly supply the expence attending the execution of a plan for preventing the small-pox being ever again epidemic in the town. The advantages gained by the city and its neighbourhood, by excluding the epidemic small-pox, could not be expressed by any pecuniary estimate. That disease, though, in general, it first appears among the poor inhabitants, yet quickly spreads, from incaution, to the houses of their more opulent neighbours. But were a plan similar to that of Chester adopted, security would prevail; opulent families might confidently relieve the distressed poor, without the dread of suffering for their humanity; the rich might secure their children against a terrible disorder, without the dread of spreading contagion among their poor neighbours; the industrious labourer would escape the visitation of sickness, often to him the forerunner of poverty, family discord, and extreme wretchedness; and the inhabitants of the country would find a visit to the city, attended with no more danger to their infant families than their accustomed walks in the meadows.

I was encouraged to hope, by friends with whom I had spoken on this plan, that it will be received here with approbation; I therefore requested of Dr. Haygarth, now resident in Bath, advice respecting the execution of the plan; and am encouraged by him to believe, that even if the cow-pox were not substituted for the small-pox, the rules of the Chester society, where-ever they may be adopted, will be an effectual means of excluding the epidemic small-pox. But the cow-pox render all restraint unnecessary; and will, in their natural progress, entirely eradicate the small-pox. In the mean time the rules of the Chester society may protect us from the ravages of the casual small-pox.

The first great object may be attained, by the parishes offering to those who may accept it, the gratis inoculation of their children; leaving to the choice of the parents, whether they shall have the small-pox or the cow-pox. If the former be preferred, the parents must engage to observe the regulations; if the latter, no restrictions are required.

A society should be formed, in addition, to pay, by subscription, the rewards to parents and friends for taking care of the health and safety of their neighbours,* and for the purpose of providing a constant supply of cow-pox matter.

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* The few rules necessary for conducting such a society, may be seen in Dr. Haygarth's account of the Chester Society.

The general inoculation of this city would be attended with leſs difficulty than general inoculation in other more populous towns, as Leeds, Liverpool, and Mancheſter, where it has been accompliſhed. The ſurgeons of the Diſpenſary have already humanely offered their ſervices to the poor of the city and neighbourhood, extending to them the advantages the cow-pox offer. The public is already indebted to them, and their aſſiſtance may facilitate the execution of a plan I have here ſketched out.

The following paragraph I tranſcribe from a letter, with which Dr. Haygarth lately favoured me.

" You probably know that theſe ſpeculations (referring to his own writing) to exterminate the caſual ſmall-pox, have commenced in Germany. About a year ago, along with a tranſlation of the *Sketch* [the title of one of Dr. Haygarth's publications] I received ſeveral papers in German and French, explaining a medical aſſociation for this purpoſe. On this buſineſs three hundred phyſicians had delivered their opinions. Moſt of the principal governments in Germany ſupport this meaſure. They promiſe to ſend an account of their proceedings every year to every government of Europe. This buſineſs is chiefly promoted by Drs. Junker, Fauſt, Lenz, &c. &c."

In another part of his letter, Dr. Haygarth ſays, that " an introduction of the vaccine, ſtill more than of the variolous inoculation, would effectually promote the great object of my publications."

Dr. Hunter obligingly allows me to add the following extract from a letter I received from him a few days ſince. " A general inoculation for the cow-pox, holds out to the community at large a ſecurity againſt the caſual ſmall-pox, in a manner that muſt meet the approbation of all ſerious and ſober perſons. The endeavour to introduce a mild diſeaſe, in order to exterminate one of an alarming and dangerous nature, reflects great honour on you and the gentlemen of this city, who have voluntarily ſtepped forward in the cauſe of ſo much humanity; and I beg leave to aſſure you and the other gentlemen, that I am ready to give my gratuitous aſſiſtance when called upon as a profeſſional man."

It was lately reported that David Ainſworth, a child two years old, had the ſmall-pox ſince he had the cow-pox. The report is unfounded, though he ſlept with his ſiſter during the whole time ſhe was in the natural ſmall-pox. The girl had been inoculated for the cow-pox at the ſame time as her brother, but the infection did not take place in her.

I am, Sir, yours, &c.

York, Oct. 1, 1800. ROBERT CAPPE.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IN Number XVIII of your valuable Medical and Phyſical Journal, Dr. Kinglake ſays, that in labours the ſupport of the perinæum is more worthy of female attention than that of an experienced accoucheur, and that the practice of midwifery is not uniformly neceſſary. In anſwer to which, I would ſuppoſe, that Dr. Kinglake has rarely attended to natural labours, or elſe he would certainly never have objected to the ſupport of the perinæum. From the reſpectable authority of Drs. Oſborn and Clark, to whom I am indebted for my ſhare of knowledge in this ſcience, the neceſſity in their lectures was ſtrongly inculcated of making a proper preſſure upon the perinæum, (and ſince then by Dr. Oſborn, in his excellent work upon Natural and Laborious Caſes of Midwifery,) for the benefit of ſecuring it againſt laceration, and at the ſame time that the expulſion of the child will be prevented from haſtily taking place; by which means the placenta will be delivered with more eaſe both to practitioners and patients, and in nineteen times out of twenty will be one means of facilitating its expulſion.

Notwithſtanding what Dr. Kinglake has advanced, the ſupport of the perinæum is probably one of the principal objects in the practice of midwifery, and conſtitutes the greateſt part of a natural labour. The reſiſtance employed by an experienced practitioner, muſt certainly be greater than that perhaps of a kindred female; the benefit greater, and more attention paid to the ſtate of the patient by leſs frequent examinations per vaginam.

The reſiſtance has certainly prevented laceration; and other evils have taken place from a want of a due regard being paid to this ſubject, and have principally happened to ignorant women, denominating themſelves midwifes. If Dr. Kinglake wiſhed midwifery to fall again univerſally into the hands of ignorant women, (which ſeems to be the caſe) this is certainly one way of encouraging it, as by mentioning ſuch circumſtances as theſe, they may militate againſt the general practice.

As the Journal is univerſally read by numbers not of the profeſſion,—from a worthy author of the Qualifications of an Accoucheur, I beg leave to ſelect theſe few remarks: "If inſtances were not known, one would ſcarcely ſuppoſe that any man would be ſo unfeeling and audacious, as to practiſe this branch of the art without a regular training, or that from any compliment

compliment husbands would chuse such a person to act in this *important office*; the whole association of professors and practitioners in this department, should, for the sake of *humanity*, earnestly unite in discountenancing untutored intruders; if *guardians of the profession fail to support regularity*, incompetent judges cannot be blamed for making improper distinctions. Students who are at the expence of a regular education, who closely apply in acquiring qualifications, and fulfil what is required of them, lose the necessary spur to industry, when the unqualified can gain equal privileges and equal encouragement.

"Regulars cannot consult with ignorant and untrained pretenders to the art, consistently with their duty to medical society, or with integrity to their employers.

"It may be argued, that women devoid of elementary rules, are frequently trusted with the management of this *momentous office*; but it may be asked, are not men generally preferred, in the expectation of greater safety in the hands of those that have studied the structure of the parts concerned, and the rules of practice under eminent teachers? Every conscientious professor of the art must acknowledge, that there may be greater hazard from this part of science being left to the management of men than women, unless suitable instructions have been imbibed.

"What a disappointment must it be to a delicate woman, that has with difficulty being prevailed on to consent to the customary preference, should she discover her accoucheur to have no qualifications superior to a MIDWIFE."

And again, the worthy Mr. Lucas says, "As far as many year's experience have enabled me to judge, a regular disciplined accoucheur may find that some recent information may be derived from every case; but such proficience cannot be acquired without a proper foundation, a regular education."

Having attended a considerable number of women, I am of Mr. Lucas's opinion, that something may be learned from every case; I have attended in midwifery, and I can also add, and I think the generality of practitioners will allow, that by a proper management of natural labours, with equal regard to the support of the perinæum, &c. they will find that the women recover much better; a good knowledge of natural labour certainly assists us with information in all cases of the preternatural; it is frequently to be observed where one stage of parturition is unusually rapid, or unnaturally expedited, a subsequent stage is retarded; as, for instance, where the child is suddenly born from a want of due support of perinæum, the placenta is retarded; this I know to be frequently the case.

There

There will be great utility in counteracting an hafty procedure, particularly in impatient women, in order that the concluſion of birth may co-operate in aſſiſting the contraction of the uterus, and, conſequently, the expulſion of the placenta.

Would not a ſenſible, humane practitioner be ſeriouſly vexed if, by not paying proper attention to the laſt ſtage of delivery, it ſhould be ſaid by his negligence the woman was injured? Would he have a chance of being employed in the ſame family? Would not his compeers, in the ſame town, take advantage both of his negligence and his want of ſkill?

With regard to the delivery of the placenta, conſiderable miſchief has enſued from its immediate expulſion. My practice is, that if the placenta does not come eaſily away in the courſe of twenty minutes from the birth of the child, by pulling gently at the funis, in different directions; if, then, there ſhould be any retention, I wait another half hour; and, by gently pulling, try if any advances have taken place. If no advances have taken place within an hour or two, (according to circumſtances) I then find it neceſſary to deliver by manual introduction; and not more than two caſes have taken place in my own practice. But in all caſes we have not the advantage of the funis, by its rupturing from the ſmallneſs of its ſize. In moſt caſes the manual operation is certainly prevented, by paying a proper regard to the ſupport of the perinæum, and preventing the hafty expulſion of the fœtus. I am,

GENTLEMEN,

Your humble ſervant,

Wakefield, Yorkſhire. SAM. THOMAS, Surgeon.

P. S. Upon mature conſideration, I ſhould be ſorry to doubt the abilities of Dr. Kinglake, whoſe papers in your uſeful Miſcellany I have read with pleaſure, (all except the laſt); and, being an advocate for the good ſucceſs of the ſcience of midwifery, which I think ought to be in the hands of the moſt intelligent practitioners, and not in thoſe of low uneducated women, it could not eſcape my notice without ſomething being ſaid on the ſubject, as I think if the perinæum is not properly ſupported, laceration may enſue, and perhaps other direful ſymptoms take place. In a caſe of the preſentation of the face, or rather the chin, which I had lately, if there had not been due ſupport applied, during every pain, to the perinæum, laceration, I am certain, would have taken place.

On the good Effect of Æther and Tinct. Opii, in Cramp of the Stomach.

ON the 2d of September, a lady was attacked (though in previous health) with violent pain of the back while ſtooping; which immediately extended from the ſpine to the ſternum, and fixed upon the region of the ſtomach, and was ſo violent as to cauſe clammy ſweats, a moiſt, pale, cadaverous look, juſt as if ſhe was dying; pulſe hardly perceptible; and, to expreſs her own feelings, ſaid ſhe thought ſhe was dying. As ſoon as poſſible I got her ſome æther and tinct. opii, which eaſed her a little, ſo that ſhe was able to get up ſtairs to bed, and applied warm flannel, &c. to the ſtomach; but the pain became more ſevere, attended with violent ſhivering, which continued for the ſpace of twenty minutes; clammy ſweats and paleneſs; pulſe hardly perceptible, and the extremities cold. Being now very much alarmed, Dr. Crowther, a phyſician of eminence in this town, was ſent for; he came immediately, and requeſted me to continue to give her æther ʒj. tinct. opii gt. xv.; to rub the back with æther, &c. and for her to take it every hour, if the pain continued violent; to apply hot cloths, wrung out of water, to her feet. Theſe remedies were perſiſted in for an hour or two, and the æther, &c. gave almoſt inſtant relief. The ſtomach was ſo weak that ſhe was not able to bear any thing ſtronger than a little ſaloop, in which there was put a ſmall quantity of brandy. In the evening, being coſtive, had a clyſter, and the pain in the ſtomach better; but could not bear up in an erect poſture of body, as, if ſhe did, the pain returned with violence; but always found relief from a doſe of the æther.

On the 3d ſhe was better, except the pains coming on at ſlight intervals; but could not yet bear up in an erect poſture of body. Continued the æther and tinct. opii ter die, et enema nocte.

4th. Still continues better, but the ſtomach ſo weak as not to take broth; ſtill finds herſelf eaſy when laid down; in the erect poſture very uneaſy. Æther, &c. continued.

As it would be uſeleſs to give every day's account, which would be only treſpaſſing on your time, I have only to obſerve that ſhe has experienced ſlighter attacks, which have not been ſo violent as the firſt, but that ſhe has always found immediate relief from æther, and which ſhe thinks was evidently one means of ſaving her life.

The above caſe certainly ſhews us the good effects of æther; for

for if the debilitating ſyſtem had been made uſe of, probably the lady would not at this time have been living.

Having obſerved in your Journal the good effect of ol. terebinth. in burns and ſcalds; a near relation of mine happened to ſcald herſelf with ſome boiling broth, which cauſed intenſe heat and inflammation, but on pouring ol. terebinth. upon the part, for the ſpace of a quarter of an hour, it gave her eaſe, nor was any ill effects produced by the ſcald.

Wakefield, Yorkſhire, Oct. 7, 1800. SAM. THOMAS, Surgeon.

Account of a peculiar Sort of Tumour obſerved on the Heads of new-born Infants; by Dr. MICHAELIS, of Harburg.

[Extracted from Loder's Journal of Surgery, &c. Vol. II. No. IV. p. 657, in German.]

THIS tumour is to be diſtinguiſhed from ſwellings on the head, with which children are ſometimes born, or that appear after a ſlow and difficult birth, occaſioned by long preſſure or the rupture of ſome blood veſſels; and it differs, by the following marks, from any other ſwelling of the head, hernia cerebri, or hydrocephalus internus.

1. By being often obſerved after very eaſy labours.

2. By not always appearing on prominent parts of the head; though this may ſometimes be the caſe, on account of their generally being remarked at the temples.

3. By commonly appearing one day after birth.

4. By being more elevated and circumſcribed than any other ſwelling on the head, and by ſhewing a perceptible fluctuation.

5. By the ſkin, with which it is covered, keeping its natural colour and ſtate, and by its being eaſily moveable on the tumour, without changing the ſituation of it, a circumſtance that ſeems to prove its being deep; the ſkin, therefore, appears to move on the tumour when the child is crying.

6. By not diſappearing or diminiſhing on the application of preſſure, and where, alſo, no ſtupor is occaſioned, a ſymptom that always takes place in a *hernia cerebri*, or *hydrocephalus internus*.

7. It differs from a tumour caused by the rupture of blood-vessels, or from a lymphatic swelling by the singular change which the bone, on which it is situated, is observed to undergo. The external table of the bone is entirely wanting; the diploë uncovered, and the edge of the impression that is thus occasioned may be plainly felt. By this peculiar circumstance, the tumour is particularly distinguishable from any other.

On opening it, a black and coagulated blood is found in it, lying immediately on the diploë. It is very probable, that the tumour originates from a disease of the bone; and that it is not occasioned by the former, on account of their both being found in the same state from the first moment.

To remove this tumour by discutients, is an attempt that has, in most cases, proved ineffectual. The disease of the bone is increased by the pressure of the blood exciting the absorbent vessels to a greater action of the bone, whereby, at last, a hole is occasioned, and the brain injured by its being pressed. The only thing that can be done, is to open the tumour, and to let out the blood, in order to prevent the farther absorption of the bone. This operation is not without danger, on account of the loss of blood that runs from the bone as from a sponge; but by making the incisions small, it may in a great measure be avoided. It is, however, very seldom that it succeeds in healing the bone, and the children generally fall a sacrifice to this singular affection. It is, fortunately, rarely observed; but, according to Dr. Michaelis, it seemed to occur more frequently at Harburg than any where else. He relates a case of this disease, which we shall briefly state: A tumour, of the size of an egg, appeared on the right temple of a new born infant, the following day after a labour which had been uncommonly easy. As it showed the abovementioned characters, there could be no doubt of its being this species of tumour. He first tried to dissolve it, and a cold solution of sal ammoniac and salt petre in vinegar, and cataplasms of the herb *Arnica*, were accordingly applied; but having continued them nearly a fortnight without the least effect, the tumour was opened, and a black, thick blood discharged from the wound. The bleeding, which was not very considerable, ceased on the application of alcohol, in which scraped linen was dipt. The wound began to suppurate the next day, and in twelve days it was healed up; the child felt no pain whatever, and was quite well: An impression, however, remained from the want of the external table of the bone. A few weeks after the child was seized with a general erysipelas, of which it died. Dr. M. being curious to inform himself of the state of the bone where the tumour had been situated, cut through the integuments, when

when he found the bone appearing with a rough furface, deprived of its external table as far as the tumour had extended, and only feeming to be regenerated in fome places.

Befides thefe innate fpecies of tumour, fimilar ones occur on all parts of the body, and are always combined with a lofs of the bone, clofe to which the blood lies. They contain coagulated and liquid blood; and on opening them, a dangerous hæmorrhage is fometimes experienced. Dr. M. relates a cafe of a man who had four of thefe tumours; one on the right breaft, of the fize of a large egg, by which the ribs, where it had grown, were abforbed; another in the neighbourhood of the temporal artery; a third on the maxilla fuperior; and the fourth in the vicinity of the arteria fpinofa: this was difcovered on the diffection of the body; and it is probable, that by its preffure on the brain, death was brought on. None of thefe tumours had the common figns of aneurifms.

Account of a profitable Method of obtaining Phosphoric Acid. By Mr. Suersen.

[Extracted from the Northern Archives of Medicine, &c. in German. Vol. I. No. 2.]

THE fhorteft way of preparing pure phofphoric acid, is, undoubtedly, by acidifying the phofphorus with nitric acid, which is done with the leaft lofs of time, and without great expence. Although this procefs has been generally thought to require the utmoft caution, it is only neceffary when a great portion of phofphorus is infufed with nitric acid; as by the vehement action of fuch a quantity of phofphorus upon the nitric acid, a part of it ruthes out, and by getting in contact with atmofpheric air, catches fire, and blows up the veffel in which the diftillation is performed. The fame accident happens when, according to Hermbftaedt's experiment, four ounces of nitrous acid, diluted with eighteen ounces of water, are poured upon one ounce of phofphorus, and diftilled in the fand bath. There is, at firft, no perceptible activity upon the acid; but when this becomes by degrees more concentrated, a fimilar effect, as in the former operation, is produced. The procefs, as propofed by M. Suerfen, is the following: Several ounces of pure concentrated nitric acid, after being diluted with equal parts of water, are fo divided, that each fingle ounce is poured into a feparate fubliming glafs, and after having put them upon an iron grate, half a drachm

of phoſphorus is added to each portion of the nitric acid, and the veſſels are heated by means of a lamp, till a ſufficient action of the phoſphorus on the nitric acid is perceived, by diſcharging a conſiderable quantity of nitrous fumes, but without becoming too vehement; and, in caſe the fumes ſhould begin to illuminate, any accident that accompanies the former methods may be prevented by pouring a little diſtilled water on the mixture, and, at all events, the lamp may be laid aſide when the veſſels ſeem to be ſufficiently heated. The addition of the phoſphorus is now continued in ſmall portions, and the veſſels alternately heated, till a ſufficient quantity of it is acidified. For the acidification of a conſiderable portion of phoſphorus, four ounces of nitrous acid are generally required of 1,508 ſpecific gravity, at a temperature of 61° Fahrenheit, and it may be completed in the ſpace of four hours. The phoſphoric acid thus obtained is very diluted, and muſt be expoſed to a diſtillation in the ſand bath; while it continues there a phoſphoric acid is obtained, of the conſiſtency of a ſyrup, whoſe ſpecific weight is about 2000. By this method two ounces and a half of a very concentrated and pure phoſphoric acid are obtained from one ounce of phoſphorus.

CRITICAL

CRITICAL RETROSPECT

OF

MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

Recherches ſur l'Influence de l'Air dans le Developpement; i. e. Researches on the Influence of Air in cauſing Diſeaſes, on their Character and Treatment; a Work, in which it is propoſed to eſtabliſh, on Principles of Medicine and Obſervation, the Relation of Noſologic Conſtitutions; by L. D. A. Bouffey, Phyſician at Argentan. Paris, Year 7, for Didot the younger, pp. 176.

To enquire into the influence of the atmoſpheric conſtitution, in producing diſeaſes, is an undertaking both extenſive and difficult; and though it is a ſubject of the greateſt importance, it has not yet ſufficiently been inveſtigated, and ſtill requires to be aſcertained by experience and the evidence of facts. The author of this publication has, therefore, a juſt claim to the praiſe of the public, for having devoted himſelf to this taſk by collecting materials for the purpoſe, and arranging them in ſuch a way, that a more perfect theory can be founded upon them. The work, of which the author has publiſhed this firſt volume, is divided into *three parts*. *In the firſt*, which is comprehended in this volume, the author, after having explained the general principles relating to meteorology, ſubjoins ſome remarks on the neceſſity of obſerving the viciſſitudes of the atmoſphere, on the defects to which this ſort of obſervation is ſtill ſubject, and on the means of rendering it more uſeful to medicine. He proceeds farther to examine the atmoſpheric air, by conſidering it with reſpect to its phyſical and chemical properties, and at laſt in its ſtate of agitation. Under this head, the winds, their origin, and the influence they have on atmoſpheric conſtitutions, and on the ſeaſons, ought to be likewiſe recorded in this general ſurvey, as without theſe the examination of each particular temperature will be rendered leſs eaſy. After having examined the phyſical cauſes, it would be neceſſary to repreſent under a general view, their action on the animal œconomy; and this is the point to which the author has aimed, by examining the effects of atmoſpheric air, or rather its decompoſition in the lungs, and the impreſſion it occaſions in the interior organiſation. *In the ſecond part*, the author means to treat particularly of the four principal temperaments, as adopted by *Hippocrates; and in the third part*, he is to conſider the air, when charged with heterogeneous particles, in a greater proportion than it generally is found to contain, which he comprehends under

four

four different classes. In the *first*, he is to examine the matter of electricity, as far as it influences and alters the atmospheric air; in the *second*, the mineral exhalations; in the *third*, the vegetable; and in the *fourth*, the animal exhalations.

Reflexions sur la Nouvelle Methode d'Inoculer la petite Verole avec le Virus de Vaches; i. e. Reflexions on the New Method of Inoculating with the Vaccine Poison, by T. S. Vaume, M. D. Paris; a pamphlet of 11 leaves.

According to the author of this Pamphlet, the inoculation of the small-pox, undertaken by well-informed persons, leaves nothing farther to be wished, and is quite satisfactory. In this respect he appeals to the numerous experiments made by himself with the greatest success, in his practice at Agacio. He considers the fever, and other symptoms which precede, accompany, and follow the eruption, as necessary requisites for the success of inoculation, observing, at the same time, that it is always in the power of a physician to subdue them. Upon these premises he concludes by asserting, that the new method of inoculating with the cow-pox, (vaccine, called by him vacchine) ought to be utterly rejected, even without any farther examination.

Voyage dans l'Empire de Flore; i. e. Travels in the Empire of Flora; or, Elements of Vegetable Natural History; by L. M. P. T. Physician, 2 vol. 8vo. Paris, Méquignon.

This Publication, one of the best books on the elements of Botany, is unluckily the result of a literary robbery, being a copy of the lectures delivered by the celebrated *Desfontaines*, who has in different Journals re-claimed it, and has reprobated this abuse of confidence, and this sort of spoliation of the product of his studies. However, though the author is justly to be blamed on this account, yet we cannot forbear to confess, that he has done much service to young botanists, by putting into their hands these lessons, of which they particularly stand in need, and which Desfontaines would probably not have so soon published, as he is only accustomed to bring before the public, the results of a long and laborious study. We recommend our readers, who are happy enough to find pleasure and comfort in the study of Botany, to procure this work, which is a good compendium of that study.

Illustratio Iconographica Insectorum, quae in musæis Parisinis observavit et in lucem, edidit J. Chr. Fabricius, præmissis ejusdem Descriptionibus; accedunt Species plurimae, vel minus, aut nondum cognitae; Authore Ant. Coquebert, Societ. Philomat. et Historiae Natur. Paris, Socio, Tabular, Decas 1, Parisiis, Typis Didot, natu majoris, An. 7, 4to. vellum paper, figures, coloured.

Mr. Fabricius has described in his Systematic Entomology, and the Supplement to it, several new insects, which he saw in the different

different collections at Paris. His descriptions, however, being not always sufficient for determining the species he had in view, the great difficulties hence arising can only be removed by good figures of the orignals, signed by his hand; by which means these objects will, as it were, be multiplied and perpetuated, and which, if once destroyed, may perhaps not be found again. It is therefore incumbent upon us to do proper justice to the zeal and merit of Cit. Coquebert, author of the work we are here announcing, which consists in representing by figures, coloured after his own drawings, the insects observed in the Paris cabinets, and described by Mr. Fabricius; in adding the description and synonimous terms of that naturalist, and in publishing other new species, or those that are less known. The celebrated artists, Cit. Maleuvre for engraving, and Didot the elder for the typographical part, have assisted in this interesting work, and seconded the pencil of a man, who knows how necessary it is to observe and study Nature, before he attempts to copy her. The 10 first plates contain about 120 figures, a great number of which present the insects in detail. He begins with those that are particularly subject to be destroyed, belonging at the same time to less numerous classes than others, viz. the *Symitotes*, *Peezotes*, and *Ryngotes* of Fabricius. North America, Cayenne, the Barbary states, and the south of France, are the principal countries from which the species he has figured are brought. The new genera of Delphax, Oryssus, and Psocus are here figured, with an accurate representation of their organs of manducation, in which he has been much assisted by Cit. Latraille, to whom the plate is entirely owing of the little known genus Psocus, which on account of their minuteness and fugacity, had hitherto escaped the observation of naturalists. Some anatomical observations, new synonimous terms, and other remarks, give an additional value to this work; and we are convinced that it will meet with the most favourable reception by every naturalist and amateur.

Mr. Davy's Chemical and Philosophical Researches.

[Concluded from pp. 360—364, of our last.]

" I was awakened by head-ache and painful nausea. The nausea continued even after the contents of the stomach had been ejected. The pain in the head every minute increased; I was neither feverish nor thirsty; my bodily and mental debility were excessive, and the pulse feeble and quick.

" In this state I breathed for near a minute and half five quarts of gas, which was brought to me by the operator for nitrous oxyde; but as it produced no sensations whatever, and apparently rather increased my debility, I am almost convinced that it was from some accident, either common air, or very impure nitrous oxyde.

" Immediately after this trial, I respired 12 quarts of oxygene for near four minutes. It produced no alteration in my sensations at

at the time; but immediately after I imagined that I was a little exhilarated.

"The head-ache and debility ſtill however continuing with violence, I examined ſome nitrous oxyde which had been prepared in the morning, and finding it very pure, reſpired ſeven quarts of it for two minutes and half.

"I was unconſcious of head-ache after the third inſpiration; the uſual pleaſurable thrilling was produced, voluntary power was deſtroyed, and vivid ideas rapidly paſſed through my mind; I made ſtrides acroſs the room, and continued for ſome minutes much exhilarated. Immediately after the exhilaration had diſappeared, I felt a ſlight return of the head-ache; it was connected with tranſient nauſea. After two minutes, when a ſmall quantity of acidified wine had been thrown from the ſtomach, both the nauſea and head-ache diſappeared; but languor and depreſſion, not very different in degree from thoſe exiſting before the experiment, ſucceeded. They however, gradually went off before bed time. I ſlept found the whole of the night except for a few minutes, during which I was kept awake by a trifling head-ache. In the morning, I had no longer any debility. No head-ache or giddineſs came on after I had ariſen; and my appetite was very great.

"This experiment proved, that debility from intoxication was not increaſed by excitement from nitrous oxyde. The head-ache and depreſſion, it is probable, would have continued longer if it had not been adminiſtered. Is it not likely that the ſlight nauſea following the effects of the gas was produced by new excitability given to the ſtomach?

"To aſcertain with certainty, whether the moſt extenſive action of nitrous oxyde compatible with life, was capable of producing debility, I reſolved to breathe the gas for ſuch a time and in ſuch quantities, as to produce excitement equal in duration and ſuperior in intenſity to that occaſioned by high intoxication from opium or alcohol.

"To habituate myſelf to the excitement, and to carry it on gradually,

"On December 26th, I was incloſed in an air-tight breathing box, of the capacity of about 9 cubic feet and half, in the preſence of Dr. Kinglake.

"After I had taken a ſituation in which I could by means of a curved thermometer inſerted under the arm, and a ſtop-watch, aſcertain the alterations in my pulſe and animal heat, 20 quarts of nitrous oxyde were thrown into the box.

"For three minutes I experienced no alteration in my ſenſations, though immediately after the introduction of the nitrous oxyde the ſmell and taſte of it were very evident.

"In four minutes I began to feel a ſlight glow in the cheeks, and a generally diffuſed warmth over the cheſt, though the temperature of the box was not quite 50°. I had neglected to feel my pulſe before I went in; at this time it was 104 and hard, the animal heat was 98°. In ten minutes the animal heat was near 99°, in a quarter

a quarter of an hour 99.5°, when the pulse was 102, and fuller than before.

" At this period twenty quarts more of nitrous oxyde were thrown into the box, and well-mingled with the mass of air by agitation.

" In twenty-five minutes the animal heat was 100°, pulse 124. In thirty minutes, twenty quarts more of gas were introduced.

" My sensations were now pleasant; I had a generally diffused warmth without the slightest moisture of the skin, a sense of exhilaration similar to that produced by a small dose of wine, and a disposition to muscular motion and to merriment.

" In three quarters of an hour the pulse was 104. and animal heat not 99,5°, the temperature of the chamber was 64°. The pleasurable feelings continued to increase, the pulse became fuller and slower, till in about an hour it was 88°, when the animal heat was 99°.

" Twenty quarts more of air were admitted. I had now a great disposition to laugh, luminous points seemed frequently to pass before my eyes, my hearing was certainly more acute, and I felt a pleasant lightness and power of exertion in my muscles. In a short time the symptoms became stationary; breathing was rather oppressed, and on account of the great desire of action, rest was painful.

" I now came out of the box, having been in precisely an hour and a quarter.

" The moment after, I began to respire twenty quarts of unmingled nitrous oxyde. A thrilling extending from the chest to the extremities was almost immediately produced. I felt a sense of tangible extension highly pleasurable in every limb; my visible impressions were dazzling and apparently magnified, I heard distinctly every sound in the room, and was perfectly aware of my situation. By degrees, as the pleasurable sensations increased, I lost all connection with external things; trains of vivid visible images rapidly passed through my mind, and were connected with words in such a manner, as to produce perceptions perfectly novel. I existed in a world of newly connected and newly modified ideas. I theorised; I imagined that I made discoveries. When I was awakened from this semi-delirious trance by Dr. Kinglake, who took the bag from my mouth, indignation and pride were the first feelings produced by the sight of the persons about me. My emotions were enthusiastic and sublime; and for a minute I walked round the room perfectly regardless of what was said to me. As I recovered my former state of mind, I felt an inclination to communicate the discoveries I had made during the experiment. I endeavoured to recall the ideas; they were feeble and indistinct; one collection of terms, however, presented itself: and with the most intense belief and prophetic manner, I exclaimed to Dr. Kinglake, " *Nothing exists but thoughts!—the universe is composed of impressions, ideas, pleasures, and pains!*"

" About three minutes and half only had elapsed during this

experiment, though the time, as meaſured by the relative vividneſs of the recollected ideas, appeared to me much longer.

" Not more than half of the nitrous oxyde was conſumed. After a minute, before the thrilling of the extremities had diſappeared, I breathed the remainder. Similar ſenſations were again produced; I was quickly thrown into the pleaſurable trance, and continued in it longer than before. For many minutes after the experiment, I experienced the thrilling in the extremities, the exhilaration continued nearly two hours. For a much longer time I experienced the mild enjoyment before deſcribed connected with indolence; no depreſſion or feebleneſs followed. I ate my dinner with great appetite, and found myſelf lively and diſpoſed to action immediately after. I paſſed the evening in executing experiments. At night I found myſelf unuſually cheerful and active; and the hours between eleven and two, were ſpent in copying the foregoing detail from the common-place book, and in arranging the experiments. In bed I enjoyed profound repoſe. When I awoke in the morning, it was with conſciouſneſs of pleaſurable exiſtence, and this conſciouſneſs, more or leſs, continued through the day."

A ſecond Eſſay on Burns, in which an Attempt is made to refute the Opinions of Mr. EARLE,* *and* Sir W. FARQUHAR, *lately advanced, on the ſuppoſed Benefit of the Application of Ice in ſuch Accidents: With Caſes and Communications, confirming the Principles and Practice brought forward in a former Eſſay. Alſo Proofs, particularly addreſſed to Surgeons of the Army and Navy, of the Utility of the ſtimulating Plan in the Treatment of Injuries cauſed by the Exploſion of Gunpowder.* By EDWARD KENTISH, author of the former Eſſay.

IN this Eſſay Mr. Kentiſh has brought forward a number of proofs in addition to thoſe mentioned in his former, of the ſuperiority of his mode of treating burns with ſtimulants over the cold applications generally recommended. His vicinity to the coal mines, where accidents frequently happen from the exploſion of inflammable air, gives him extenſive practice in this branch of ſurgery, and his experience and ingenuity claim the attention and examination of his brethren on this ſubject. He judiciouſly remarks, " that if men would in general confine their efforts to a few points, ſcience would make a more rapid progreſs, though there might be leſs brilliancy attached to individuals. It is by a diviſion of labor that perfection is to be attained in the ſcientific, as well as in the mechanic arts."

In order to demonſtrate the *principle* on which Mr. Kentiſh directs the application of ſtimulants to burns, we quote the following paſſage: " I have in my former Eſſay mentioned at ſome length the effects of different degrees of temperature upon the animal ſyſtem. It will there appear, that animals endowed with the property

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* Now Sir James Earle.

perty of life, have a power of preſerving their exiſtence under a varied degree of temperature proportioned to the perfection of their organization; and if gradually applied, the extent of the ſcale is greater. Man will exiſt from zero to two hundred and ſixty degrees of Fahrenheit's thermometer; though rapid changes much within that range will deſtroy him. Such is his glaſſy eſſence, that it appears neceſſary to treat him as artiſts do that ſubſtance, viz. to anneal him, by allowing his temperature to be changed gradually. Such is in ſome delicate conſtitutions the narrow ſcale of accommodating power in the ſyſtem, that a change which appears inſenſible to perſons of a more healthy frame, produces ſuch diſturbance in the actions of abſorption and ſecretion, as to bring on complaints of the moſt ſerious nature. Delicate ladies who keep cloſe within the houſe, in going from one room to another bring on that ſtate of the ſyſtem known by the term of *catching cold*. This ſtate is alſo very frequently induced by a too ſudden and great application of the ſtimulus of heat, after the torpor induced from lowering the temperature only a few degrees. The effect of a diminiſhed quantity of heat is proved by the facts adduced by Mr. Hunter, of the rabbits' ears, (*vide Firſt Eſſay, p.* 108.) to have ſtopped all action in the part; and the effect of increaſed heat applied to my own body (ibid, p. 111.) proves the increaſed action induced by heat. I do not mean by this to deny the power of fire combining with, and decompoſing any part of the ſyſtem to which it has been ſo applied. I am well convinced I could burn my finger off over an Argand's lamp; but after this decompoſition, I ſhould not expect that ice would draw out the caloric, and reſtore me my finger. When caloric combines with any ſubſtance, a chemical union takes place; and when this is done with the living animal fibre, it is at the expence of a deſtruction of organization, which no human art can reſtore in that individual fibre. Yet ſuppoſing a finger, or part of a finger, to be ſo deſtroyed, there muſt have been increaſed action previouſly to deſtruction; and where deſtruction ceaſes, increaſed action, from this greateſt of all known ſtimuli, will begin. Now as I think it will be granted that parts cannot be reſtored, thoſe which we have to take care of muſt claſs under the head of parts with increaſed action. If this be admitted, I believe I have formerly pointed out the beſt known modes of treatment. What to me is one of the moſt convincing proofs of the truth of the principles I wiſh to be made known, is, that the *inverſe* of them is proved to be true by the experience of all countries ſubject to a diminiſhed temperature; and, reaſoning upon the ſame data, Mr. Earle's principle muſt be erroneous: for inſtance, if in a *plus* of heat it ſhould be drawn off by cold, in a *minus* of heat, it ſhould be added by the body which is the readieſt to part with its heat. The following caſe will illuſtrate theſe principles: In the beginning of this year (1800) there was a ſevere ſtorm, in which many ſhips were loſt upon the coaſt of Northumberland, and a great number of men periſhed from the intenſity of the cold. Three were taken to a ſmall inn in a fiſhing town on the coaſt, and

as one was very much *froſt-bitten*, with the beſt intentions in the world the good people of the inn prepared a hot bath for him, in which having kept him a ſufficient time, they put him to bed, and gave him ſome hot ale and brandy. The conſequence of this treatment was, that the torpid actions of the ſyſtem were ſo rapidly put into motion, that the vital power was exhauſted in forty-eight hours, and the man died. The others, who fortunately had not ſo much *falſe* care beſtowed upon them, recovered with difficulty; for although they did not uſe the bath, they had a ſhare of the other ſtimuli applied, ſufficient to produce pernicious effects. Now had Mr. Earle's principle been right, the man would have lived, as they took the readieſt way of applying, both externally and internally, the *deficient heat*. Had the oppoſite practice been taken with this man, I have very little doubt but he would have recovered: the froſt-bitten parts (the extremities, both ſuperior and inferior) ſhould have been thawed in water not above 40 degrees; he ſhould then have baen put into a cold bed in a room without a fire; and if he had been allowed any ſtimulating drink (ſuch as ale) it at leaſt ſhould have been cold: but of the propriety of allowing, at an *early* period, even this ſtimulus, of *cold fermented* liquor, I have my doubts. For the danger of allowing too great ſtimulus after what is termed an accumulation of irritability, I refer the reader to accounts of ſhip-wrecked people: the narrative of the loſs of the Bounty will ſupply them with ſufficient obſervations on this head."

The ingenious author purſues the *principle* of treatment recommended in his former Eſſay, though in the detail of practice he has been induced to make ſome alterations, which he thinks highly advantageous. " In the firſt ſpecies, *where the action of a part only is increaſed*, I have not found any thing better for the firſt application than the *heated* Ol. Terebinth. and the digeſtive thinned with the ſame. In ſuperficial burns, when the *pain* has ceaſed, it will be adviſeable to deſiſt from this application in about four and twenty hours, as that time in many caſes will be ſufficient, and at the ſecond dreſſing a digeſtive ſufficiently thinned with common oil, will be adequate to the caſe; and on the third day to begin with the ceratum e lapide calaminari. I have frequently ſeen ſecondary inflammation excited by the remedy, which in the firſt inſtance puzzled and perplexed me conſiderably: I have likewiſe been informed of this conſequence by ſeveral gentlemen. The moſt certain *remedy* for this unpleaſant ſymptom is to apply a plaſter with digeſtive thinned with oil, or a plaſter of cerate, and over that *a large warm* poultice. This moſt effectually takes off the irritation of the part, and the cerate will finiſh the cure. Should there be much uneaſineſs of the ſyſtem, an anodyne proportioned to the age of the patient ſhould be given."

Mr. K. is very ſevere upon Dr. Underwood in his chapter on burns and ſcalds (*vide Diſeaſes of Children, Vol. 2, p. 106.*) for preſcribing applications whoſe actions and effects are ſo diametrically oppoſite.

A Treatiſe

A Treatise on the Bath Waters; by GEORGE SMITH GIBBES, M. D. F. R. S. &c. 8vo. p. 71. London, 1800, Robinsons.

As the substance of this scientific and correct work has already appeared in Mr. Nicholson's Journal, and as Dr. Saunders has given the results of the analysis in his work on mineral waters, of which we gave some account in our last Number, it will not be necessary for us to make long extracts.

"With such powerful effects," the Author observes, "as the Bath Waters are known to produce on the human constitution, it is astonishing to find that so few active principles should have been discovered by those learned men who have made them the subject of their enquiries. It has been alleged, that all attempts to discover the properties or effects of mineral waters on the human body by chemical experiment or analysis are vain and insignificant, as many effects are produced by them not to be accounted for from any discoverable impregnation. The learned Dr. Falconer very justly combats this opinion. He observes, "that such reasoning, "if applied equally to all branches of learning, would preclude "all search whatever; and, had it formerly obtained, would have "prevented our acquisition of many useful and important discoveries which we now enjoy." The Doctor, with that liberality which distinguishes the character of the man of learning, observes, that in discussions on subjects of science, when opinions alone are controverted, it may be alleged, that no apology is necessary; as candour should be the inseparable attendant on learning; and no man of science should be ashamed to receive information, from whatever channel it may be derived. As an apology for offering to the world the present performance, it ought to be recollected that the science of chemistry has within these few years made very rapid advances, and the cultivators of it have now many more fixed principles, on which to found their reasonings, than could have been suspected by those who applied to it but a few years since. Even the existence of many very active substances was then totally unknown. Many agents and principles, which, a few years back, were believed to regulate the phenomena of Nature, are now proved to have had no existence but in the imaginations of the cultivators of this science. A science which comprehends so large a field of inquiry must doubtless be subject continually to changes, according to the advances which are made in it. The detection of a new principle must, in every science, alter the reasonings respecting the phenomena which it presents.

"There are daily poured forth from the springs at Bath, upwards of two thousand hogsheads of water; which water is heated considerably above the temperature of ordinary water. As a matter of curiosity, I find that the quantity of heat which is evolved by them in the course of one year, above the medium heat of other springs, would render above seven hundred million of cubic inches of iron red hot.

"The following is a statement of the heat and quantity of the Bath Waters:

The

	Tuns.	*Hhds.*	*Gal.*
The King's Bath contains - - - - -	314	0	36
The Queen's Bath - - - - - - -	81	3	11
The Croſs Bath - - - - - - - -	53	0	47
The Hot Bath - - - - - - - -	54	0	27
	502	4	58

" Sixteen ounces or forty cubic inches of water at 55° of heat were raiſed by a cubic inch of iron red hot to 90°.

" One cubic inch, of red hot iron, would raiſe fifteen cubic inches of water, at 55° of heat, to the heat of the Bath waters; and there ariſe two thouſand hogſheads of water every day from the ſprings.

" The temperature of the King's Bath, and Hot Bath, is about 114° of Fahrenheit; by pumping a conſiderable time they have been found to raiſe the thermometer to 116°, and even to 118°. The Croſs Bath is of ſomewhat a lower temperature, about 110° or 112°.

" It is difficult to aſcertain with preciſion the heat of the Bath waters. When examined under the ſame circumſtances, their temperature appears uniform. The regular temperature of the Bath waters, and the length of time that they have been known to pour forth their hot ſtreams, would induce us to think that the cauſe of their heat is uniform, and very deeply ſituated in the bowels of the earth. I beg leave to offer a conjecture reſpecting that regularity of their temperature; which is, that at ſome great depth in the earth, they are at a very high temperature, and that in coming up to the ſurface of the earth, their temperature is lowered to the degree they are found to poſſeſs. Thus it ſhould ſeem that they are analogous to the Geyzer in Iceland, and that at a certain depth, they would be found to have nearly the ſame appearances. That they are not of the nature of common ſprings of water is evident from their not being affected by the viciſſitudes of weather, nor from the alternation of wet or dry ſeaſons.

" The following extract, however, from Lord Gardenſtone's travelling memorandums, ſeems to ſhew that water does ſometimes acquire a conſiderable temperature at no great diſtance from the ſurface of the earth.

" Aix in Provence."

" Dr. Philips informed me of a remarkable fact relative to theſe " waters. About three or four years ago, the inhabitants were " alarmed by a ſudden and great defect in the uſual flow of water " from their fountains. The flow gradually diminiſhed, and in a " few days they were almoſt dry; happily the cauſe of this ſcar- " city was ſoon diſcovered and eaſily remedied. In fact, a farmer " about the diſtance of half an Engliſh mile from Aix, had, " at this time, on ſome ſcheme of improvement, dug up part of " his ground, when, at a ſmall depth from the ſurface, a body of " water ruſhed out and continued to flow very plentifully. The " fact being reported at Aix, they conjectured that the farmer had

" thus

" thus accidentally fallen upon and diverted the ſtream which " ſupplied their fountains; but, upon inquiry, the farmer's ſtream " was found to have no degree of heat; on the contrary, it was " a very cold ſpring water.

" The experiment however was made. The farmer's ſtream " was replaced, and immediately the fountains of Aix were re- " pleniſhed with the ſame plenty and quality of water as formerly. " Thus it appears, with certainty, that this water acquires its " heat in the courſe of running from the farmer's ground to Aix; " but how or where it is impregnated with the quality of heat, is " not yet determined."

" I could mention a great variety of inſtances where the Bath waters have produced great effects in diſeaſe; but as I intend to make the medical properties of theſe waters the ſubject of the ſecond part of this treatiſe, I muſt content myſelf at preſent with expreſſing a hope that even thoſe who have hitherto conſidered theſe waters as inefficacious, will be inclined to agree with me, in allowing that theſe principles muſt have great medical powers.

" According to my experiments I beg leave to make a ſtatement of the Bath waters in the following manner:

1. The temperature at medium in the King's Bath 114°, in the Hot Bath a little above that of the King's Bath, and in the Croſs Bath about 96°.

2. In the water carbonic acid gas and azotic gas in very ſmall quantities. The carbonic acid ſurſaturates the carbonate of lime which is evolved by boiling. The following aëriform fluids eſcape from the ſprings through the water, and appear in bubbles on the ſurface:

a. Azotic gas - - - - ,80.
b. Carbonic acid gas - - ,15.
c. Oxygene gas - - - - ,05.

3. Iron in a ſtate of extreme diviſion, the quantities in conſequence of its apparent volatility not to be eſtimated. According ſo ſome writers, the King's Bath contains the largeſt portion.

4. Sulphate of lime, or ſelenite in the proportion of ,40 of the ſolid reſiduum.

5. Superſaturated carbonate of lime ,20.

6. Silex ,15.

7. Alum, or ſulphate of alumine, ,05.

8. Common ſalt and ſulphate of ſoda ,20.

" The ſolid matter forms about a 660th part of theſe waters.

" The ſand which is thrown up by theſe ſprings is compoſed of ſilex, ſelenite, carbonate of lime, ſome ſulphur, and ſome particles of iron which have been found to be attracted by the magnet."

The Hospital Pupil, or an Essay intended to facilitate the Study of Medicine and Surgery; in four Letters. By JAMES PARKINSON. 8vo. pp. 159, price 3s. 6d. London, 1800. Symonds, &c.

THIS induſtrious and benevolent writer is ſo well known to the medical world, that our commendation can add nothing to his fame.

fame. In country towns, from neceſſity, and frequently in London, from choice, the ſame perſon acts in the character of Surgeon, Apothecary, Accoucheur, and Phyſician. It is the education of ſuch a perſon that Mr. P. has principally in view. The firſt letter is on the qualifications and diſpoſitions neceſſary for a youth intended for the profeſſion of Medicine or Surgery. The ſecond, on the beſt method of educating a medical ſtudent, with an improved courſe of Hoſpital Studies.

"The grand object," Mr. P. obſerves, "which next calls for conſideration, is what is the beſt ſituation in which a youth can be placed; and what is the mode of ſtudy, which will moſt certainly ſecure him all the theoretical and practical knowledge, in the ſcience of healing, which, in the preſent ſtate of the ſcience, can be communicated.

"According to the preſent ſyſtem, the firſt care of a parent, who has a ſon whom he intends ſhall be educated in both branches of the healing art, is to find out ſome gentleman of reſpectability who is properly eſtabliſhed as a ſurgeon and apothecary. With him, paying a proper premium, he fixes his ſon, who has received a common ſchool education, as an apprentice for ſeven years. At the end of this period he is, in general, ſent to one of the hoſpitals in the metropolis, where he attends the lectures, and witneſſes the practice of the hoſpital for a twelvemonth, or even leſs time: and then, if a favourable opportunity offers, takes charge of the health of ſome populous neighbourhood.

"Now, on full conviction, I aſſert, that of all the modes which could be deviſed for a medical and chirurgical education, this is the moſt abſurd; and is the one which would moſt certainly exclude a young man from the chance of acquiring that knowledge which the important ſituation he is about to fill ſo imperiouſly demands.

"To put the ſubject in a fair point of view, it will be proper firſt to take a glimpſe of the manner in which the days of a young man, thus diſpoſed of, are ſpent; and then a fair eſtimation may taken of the advantages and diſadvantages which belong to this mode of communicating inſtruction.

"The firſt four or five years are almoſt entirely appropriated to the compounding of medicines; the art of which, with every habit of neceſſary exactneſs, might be juſt as well obtained in as many months. The remaining years of his apprenticeſhip bring with them the acquiſition of the art of bleeding, of dreſſing a bliſter, and, for the completion of the climax—of exhibiting an enema. If he be bleſt with a mind ſo alert, that even this ſituation, ſo ill calculated to call it into action, cannot render it torpid, he ſeizes every opportunity of gaining information; he peruſes and re-peruſes the Diſpenſatory, ſtudies ſome obſolete practice of medicine, and doſes over ſome treatiſe on phyſiology. Unknowing from actual inſpection the form, ſtructure, and ſituation of the ſeveral parts of the human body, his ideas of anatomy cannot but be exceedingly incorrect: phyſiological facts will be hardly within his comprehenſion.

ſion, and his ideas reſpecting the treatment of diſeaſes muſt be almoſt purely empirical.

"A young man, ſuch as I have already deſcribed, at the expiration of his apprenticeſhip, or ſoon after, enters himſelf as a pupil of an hoſpital; and as anxious, perhaps, to fulfil the period of his pupillage, as he was to accompliſh the term he has juſt finiſhed, he commences, at the ſame time, to attend the ſeveral lectures, and to act as a dreſſer. But when, as it muſt often happen, from the miſ-direction of his earlier ſtudies, of which I have juſt complained, he begins his courſe of obſervation, or of dreſſing, with but a ſlight knowledge of anatomy, and of the firſt principles of medicine and ſurgery, it muſt be evident that he muſt be incompetent to derive the full advantages which theſe opportunities offer to him.

"From what I have here, without exaggeration, ſtated, do you not perceive that a young man, who is placed behind the counter of an apothecary, for ſeven years, and receives his hoſpital education in the manner I have deſcribed, muſt be robbed of his fair chance of becoming a proficient in his profeſſion; and be too likely to enter upon the exerciſe of it, without being in poſſeſſion of the degree of knowledge, neceſſary for the due performance of the duties of ſo important a ſtation?

"From your deſcribing your ſon to be of an age fit for apprenticeſhip, as I have already remarked, and from the remembrance retain of him, I ſuppoſe him to be about fourteen or fifteen years of age. The plan which I ſhall propoſe will, therefore, be ſuch as I think may be commenced by a youth of that age.

"The knowledge of ANATOMY being neceſſary, I am convinced, to be attained directly, he ſhould, therefore, as ſoon as poſſible, engage himſelf in a courſe of anatomical lectures. My friend, I know you well, and therefore, without any violent ſtretch of imagination, can fancy that you, as well as many others who may read this paſſage, will exclaim—what! attend a courſe of anatomical lectures at fourteen years of age! But a little attention will, I truſt, evince the propriety of the recommendation.

"Let it be conſidered that anatomy is the very alphabet of phyſiology, which teaches the knowledge of the animal œconomy; and that, by anatomy alone, we learn the natural ſtate of parts, as well as the changes produced by diſeaſe, the removal of which will be ſo much the object of his future endeavours. An early knowledge of anatomy muſt, therefore, be obtained: but as three or four months muſt now elapſe before any courſe of anatomical lectures commences, let the intermediate time be employed in rendering his knowledge of the *Latin* and *Greek* more perfect; but particularly of the former.

"He ſhould, at this period alſo, read ſome elementary treatiſe on anatomy; ſuch as Dr. Hooper's Anatomical Pocket-book, ſince he will thereby gain ſome information reſpecting thoſe parts on the depicting of which his pencil is exerciſed; at the ſame time, that it will be to him as a nomenclature, teaching him the

meaning of the various terms used in the science. He may also employ himself, at times, in obtaining some general knowledge of the several branches of NATURAL PHILOSOPHY.

" By a sedulous application he will thus render himself capable not only of comprehending the language of a lecturer; but also of better accompanying the lecturer, in the description of the various parts of the human body, and of their several offices. As soon as the opportunity presents, he should commence his attendance on anatomical lectures; but not without having impressed on his mind, that his future progress in his studies depends on his present vigilance and attention. Those hours which his lectures do not engage should be employed in tracing over the parts which have been the subject of the preceding lecture, in some anatomical work, such as Winslow's System of Anatomy; or, in some accurately drawn plates, such as those of Albinus, Eustachius, &c. by occasionally copying of which he will now much accelerate the obtaining of anatomical knowledge. In this manner, with two courses of lectures, he should pass the winter.

" In the season which intervenes between this period and the next winter course of lectures, he may be employed in the reading of some system of anatomy, as well as of physiology, written in Latin, such as the *Prælectiones Anatomicæ* of Leber, and the *Primæ Lineæ Physiologiæ* of Haller; by doing this he will keep up, at the same time, his anatomical knowledge and his acquaintance with the Latin.

" With his next courses of anatomical lectures should be combined lectures on PHYSIOLOGY. These, from the anatomical information he has now gained, and from the studies which have lately employed him, he will now be able to understand, sufficiently to secure his attention, and to excite that interest which due to a science, the knowledge of which is of so much consequence to him. During his attendance on the first course of this second set of anatomical lectures, he should, at the latest, commence the exercise of PRACTICAL ANATOMY. If this be properly attended to, and a due portion of the hours, not employed in dissection and lectures, be given to revising and copying the short-hand notes of the physiological lectures, his time will be fairly, and I doubt not successfully employed.

" Having thus completed his second season, his mind will have now become well furnished with fundamental knowledge; and his summer course of studies may be of course widened. His reading will now be extended to the more voluminous works of Haller, Monro, &c. by which, with occasional reference to his notes, and the exercise of his pencil, his anatomical and physiological attainments will be considerably increased. He will now read some compendium of modern CHEMISTRY, perhaps the one which I have published for the use of students may be as proper as most, or should he choose a larger work, the Principles of Chemistry, by Dr. Gren, is recommendable.

" The other branches of natural philosophy must now be again earnestly

earneſtly attended to; and, if poſſible, the knowledge of them ſhould be accelerated, by the happy illuſtration which will be yielded, by a courſe of lectures and exhibition of experiments.

During this period he may alſo impreſs on his mind, ſo ſtrongly as to be prompt to his recollection, the generic characters, at leaſt, of diſeaſe, from the Noſology of Cullen. After this he may read, with advantage, the Firſt Lines of the Practice of Phyſic, by the ſame celebrated writer. Some ſyſtematic treatiſe of ſurgery may now alſo engage his attention: and he ſhould likewiſe obtain ſome knowledge of the MATERIA MEDICA.

"He will now be prepared to reſume his winter courſe of ſtudies, which muſt now compriſe two courſes of lectures on CHEMISTRY, on the PRACTICE of PHYSIC, and on the PRACTICE OF SURGERY, and a continuance of anatomical lectures and diſſections.

"His third term being thus filled up, and completed, he will be found qualified to attend to the demonſtration of the nature of diſeaſe, and the effects of medicines, in CLINICAL LECTURES; he will now alſo be enabled to derive conſiderable advantage by attending the hoſpital as an attentive obſerver."

The third letter contains directions for the proſecution of hoſpital ſtudies, according to the *preſent* ſyſtem of medical education; and the laſt ſuggeſts hints on entering into practice, and on medical juriſprudence, &c.

We earneſtly recommend this work to all young men who are at preſent, or propoſe to be, engaged in the ſtudy of Medicine or Surgery.

A Comparative Statement of Facts and Obſervations relative to the Cow-Pox, as publiſhed by Doctors JENNER *and* WOODVILLE. 4to. pp. 43, pr. 5s. London, 1800, Low, &c.

Dr. WOODVILLE's ſecond publication, entitled "*Obſervations on the Cow-Pox,*" were noticed at p. 256 of Vol. III. and we there intimated that they appeared to have been dictated by the ſenſorial powers of irritation and ſenſation, rather than thoſe of volition and aſſociation; and we then thought they required only to be left to the attempering effects of Time. This author, however, appears to think otherwiſe, and has attempted to aſſimilate theſe oils and acids by the *tertium*, reaſon, or compariſon. The following extracts will enable our readers to judge of the author's candour and accuracy.

"To prevent the poſſibility of miſrepreſentation, Dr. Jenner's poſitions ſhall be contraſted with correct extracts from Dr. Woodville's pamphlets.

"We ſhall begin with the moſt important poſition of Dr. Jenner:

'*That perſons, who have been affected with Cow-pox, are rendered perfectly ſecure from the effects of variolous contagion.*'

* " It has been aſſerted, that perſons have had the Small-pox " after having been affected with the Cow-pox; and ſome facts " have been publiſhed with a view to ſhow that inſtances of this " kind have actually happened. But all theſe, as far as I have " ſeen, have been very defective in not affording ſufficient proof, " that the affection ſuppoſed to have been the Cow-pox, was in " reality that diſeaſe. On the other hand, the inſtances which " have been brought forward to prove that thoſe who had under- " gone the genuine Cow-pox reſiſted the infection of the Small- " pox, are unqueſtionably deciſive, and ſufficiently numerous to " eſtabliſh the fact in the moſt ſatisfactory manner. This circum- " ſtance then appears to be as much a general law of the ſyſtem, " as that a perſon having had the Small pox is thereby rendered " unſuſceptible of receiving the diſeaſe a ſecond time. For of all " the patients whom I inoculated with variolous matter, after they " had paſſed through the Cow-pox, amounting to upwards of 400, " none were affected with the Small-pox; and it may be remarked, " that nearly a fourth part of this number was ſo ſlightly affected " with the Cow-pox, that it neither produced any perceptible in- " diſpoſition, nor puſtules."

" The poſition of nearly equal import is,—*That the Cow-pox is* " *not contagious by effluvia.*"

† " One important advantage which the Cow-pox is ſuppoſed " to have over the Small-pox is, that the former is not a con- " tagious diſeaſe, and not to be propagated by the effluvia of per- " ſons infected with it. This is certainly true when the diſorder " is confined to the inoculated part, but where *it produces numerous* " *puſtules upon the body*, the exhalation they ſend forth is capable " of infecting others in the ſame manner as the Small-pox. Two " inſtances of caſual infection in this way have lately fallen under " my obſervation; in one the diſeaſe was ſevere, and the eruption " confluent; in the other the diſeaſe was mild, and the puſtules " few."

" The following poſition of Dr. Jenner next merits our attention? ' *That no eruption, ending in variolous-like puſtules, belongs to the* ' *Cow-pox.*'

‡ " Although I differ in opinion from Dr. Jenner in not imput- " ing the puſtular eruptions, produced in the caſes at the hoſpital, " to any adulteration of the vaccine matter, employed in the " inoculations, yet I readily admit that *they have been*, and ſtill " *continue to be, the effect* of ſome *adventitious cauſe, independent of* " *the Cow-pox*§.

' *That*

* See Dr. Woodville's Reports, page 154.

† See Dr. Woodville's Reports, page 153.

‡ See Dr. Woodville's Obſervations, page 18.

§ Dr. Woodville, " *in his Obſervations*," is at variance with the opinion he formerly advanced " *in his Reports.*"—In the latter he aſſerts, that " *the Cow-pox* produces *numerous puſtules upon the body*:" in the former, that the puſtules " *have been*, and *continue to be, the effect* of ſome *adventitious cauſe, independent of the Cow-pox.*"

'*That the Cow-pox is a much milder diſeaſe than the Small-pox,*' is Dr. Jenner's fourth poſition.

* " In regard to the comparative mildneſs of the vaccine and " variolous diſeaſes, as produced from inoculation, I have been " enabled to give a very different report from that which I pub- " liſhed laſt year. The reaſon why ſeveral of the Cow-pox caſes " then at the hoſpital proved ſevere, like thoſe of the inoculated " Small-pox, has already been ſufficiently explained, and will, I " truſt, have the effect of placing the Cow-pock inoculation in a " more advantageous point of view than my former *Reports* pre- " ſented."

The laſt poſition, and of leaſt importance, is—" *That the Cow-pox proceeds from the diseased fluids of the horse.*

" In this Dairy Country, (ſays Dr. Jenner) a great number of " cows are kept, and the office of milking is performed indiſcri- " minately by men and maid ſervants. One of the former having " been appointed to apply dreſſings to the heels of a horſe affected " with *the grease*, and not paying due attention to cleanlineſs, in- " cautiouſly bears his part in milking the cows, with ſome parti- " cles of the infectious matter adhering to his fingers. When this " is the caſe, it commonly happens that a diſeaſe is communicated " to the cows, and from the cows to the dairy-maids, which " ſpreads through the farm until moſt of the cattle and domeſtics " feel its unpleaſant conſequences. This diſeaſe has obtained the " name of the *Cow-pox*."

Dr. Woodville, far from adopting this poſition, relates the following experiments, to prove that the diſorder in queſtion does not originate from any diſeaſe of the horſe.

† " Conceiving that the diſtemper might be produced by ino- " culating the nipples of cows with the matter of the greaſe of " horſes, in conformity with the opinion above ſtated, I proceed- " ed to try whether the Cow-pox could be actually excited in this " manner.

" Numerous experiments were accordingly made upon different " cows, with the matter of greaſe, taken in the various ſtages of " that diſeaſe, but without producing the deſired effect.

" My friend, Mr. Coleman, the ingenious Profeſſor at the Ve- " terinary College, likewiſe made ſimilar trials, which proved " equally unſucceſsful.

" Neither were inoculations with this matter, nor with ſeveral " other morbid ſecretions in the horſe, productive of any effects " upon the human ſubject."

" Mr. Tanner being known to Dr. Woodville, and reſpected by him for his integrity, Dr. Woodville can juſtly appreciate the degree of credit that ought to be given to the following letter:

" Sir,

* See Dr. Woodville's Obſervations, p. 28.

† See Dr. Woodville's Reports, p. 6, 7, 8.

" Sir,

" Some Cow-pox matter on a thread was applied to the teat of " a cow on the part from which a ſcab had been removed. I pro- " cured it from Mr. Fewſter, of Thornbury, who told me it had " been kept a long time, and that he did not think it poſſible for " it to produce any effect. I went to the cow and examined the " part where it had been applied in five days after, but it had not " produced the ſmalleſt effect. Some limpid matter, juſt taken " from the heel of a horſe, was then applied on the part, and on " the ninth day, when I firſt examined it, I found that it had pro- " duced a complete vaccine puſtule. From handling the cows teats " I became infected myſelf, and had two puſtules on my hand, " which brought on inflammation, and made me unwell for ſeveral " days. The matter from the cow, and that from my own hand, " proved efficacious in infecting both human ſubjects and cattle.

" I am, your's, &c.

" THOMAS TANNER, V. S."

MEDICAL AND PHYSICAL INTELLIGENCE.

[FOREIGN AND DOMESTIC.]

Discovery of a new Salt.

Dr. HAHNEMANN has diſcovered a new fixed alkali, of which he gives the following account. It is called *Pneumalkali (Alkali pnëum)* on account of its puffing up, in a ſtrong fire, to a maſs twenty times greater than before. It cryſtallizes in large hexagonal priſms, ending with two oblique ſides, one of which is triangular, the other pentangular. Theſe cryſtals keep very well, when expoſed to the moiſture of the air, and neither fall into powder nor deliqueſce. The *pneumalkali*, when reduced to powder, diſſolves in half its weight of water, in a heat of 200° Fahrenheit, and almoſt ſeems to liquify in its own water of chryſtallization; at 65° Fahrenheit, 140 parts of it are ſoluble in 500 parts of water. In a great degree of cold it is extremely difficult of ſolution, and precipitates therefore in the cold from its neutral ſalts, by the addition of any other alkali. It is not ſoluble in ſpirits of wine. By ſaturating a watery ſolution of this ſalt with ſtrong acids, ſome little ebullition is produced, with the diſcharge of a ſmall quantity of gas, which is not yet aſcertained to be carbonic acid. The ſulphat of this alkali is inſoluble in ſpirits of wine, and diſſolves with difficulty in water. Its neutral combinations, however, with nitric,

nitric, muriatic, and phosphoric acid, possess a greater degree of solubility, and particularly that with acetic acid. These neutral salts dissolve with ease in spirits of wine in great proportion, and the two last at a very cold temperature. The muriate of pneum shoots in feathery crystals; its phosphat is of a bitter taste; all neutral salts which it forms are, with the exception of the phosphat of pneum, disengaged from their acids by fire, and the pure pneumalkali is found remaining. For decomposing, however, the sulphat of pneum, it was necessary to employ the red heat. The nitrat of pneum, when liquefied in its water of crystallization by fire, discharges the acid in red fumes, and is thus decomposed by a less degree of heat. Thrown upon burning coals it causes no detonation, nor any other noise, but emits its red fumes without any illumination. A combination of this alkali with carbonic acid is very difficultly obtained, and the easiest way of performing it, is by decomposing in the cold, a solution of any neutral salt of pneumalkali by other mild alkali. The pure pneumalkali first falls to the bottom in a crystallized state, and at last the carbonat of pneum appears in the form of a light earth; but of this combination it separates already in the common temperature of our atmosphere, and this apparent earth is again changed in the space of twenty-four hours into pneumalkali. The colours of vegetables are in the same way changed by it, as by the other alkalies. It precipitates metals and earths, and even dislodges the barytes from its solution in muriatic acid, probably in a caustic state. The calcareous earth precipitated by it from the muriat of lime, dissolves in distilled water, forming on the surface of the solution, after having stood some time, a sort of cream. A solution of the pneumalkali, rubbed with sweet mercury, does not change the colour of it. Corrosive mercury precipitates with a crimson red colour, the nitrat of mercury, black; nitrated silver, white; &c. It decomposes the sal ammoniac in a heat that surpasses 100° Fahrenheit; but in the cold, even the caustic spirit of sal ammoniac, precipitates the solutions of its neutral salts. A saturated solution of this salt, unites in the cold with gross oils, when only shaken with them for a few moments, and forms a soap that is easily soluble in alkohol; and this solution may be diluted with distilled water, without becoming turbid.

These are the experiments which Dr. Hahnemann has hitherto made with this substance, from which, chemistry as well as medicine, may derive no inconsiderable advantages. It is to be sold by commission, at Chr. Gottlieb Hilscher's, of Leipsic, at one Frederic's d'or, or about seventeen shillings, for a glass containing about one ounce. Letters and money to be sent post paid. *(Crell's Chemische Annalen, No.* 5, 1800.)

Prof. Mascagni of Siena, relates, in a letter to Dr. Gauturi, some observations on urinary stones and gravel. The efficacy of alkalies upon them seems to consist in neutralizing the lithic acid, and by that means forming neutral salts, which dissolve easier in water than the acid itself. The urine of persons affected with the stone,

this way the property of neutralising an acid. This salt forms thick, perfectly white, and transparent crystals. It does not seem to be quite as soluble in cold water as Cit. Chaussier has observed. It detonates with the muriate of kali. Chaussier applied it with success against herpetic exanthemata. Van Mons thinks it very useful against symptoms occasioned by the abuse of mercury. He is at present engaged in experiments to combine this salt with kali, ammonia, strontite, lime, &c. to determine the proper nature of this new preparation. (*Ibid. No.* 21.)

The same chemist exposed the oxygenated pomatum to a distillation in open fire, and obtained a great quantity of ammonia. Hence it seems evident, that the azote of the nitric acid has united itself with the fuet. Put upon a hot iron it got the consistency of horn, and diffused the same smell as gelatina. (*Ibid.*)

Dr. Woodville, who has lately returned from France, where he has been to introduce the inoculation for the Cow Pox, began the practize upon three children at Boulogne, and placed them under the care of Dr. Nowell, an English physician, who was desired to send vaccine matter upon lancets to Paris, as soon as the arms of those children produced a sufficient quantity for the purpose. This precaution proved to be very fortunate; for, five days afterwards, when the matter of the same pock was tried at Paris, it produced no effect whatever; and the Cow-pox matter which Dr. Thouret had received from Geneva, and which had not been longer than four or five days upon the thread, was found to be equally incapable of producing the disease. As Reaumur's thermometer at Paris was, about that time, frequently at 29 deg. or above 96 of Fahrenheit, it was concluded that these failures afforded a proof that the vaccine matter does not preserve its efficacy so long during hot, as during temperate or cold weather. The disappointment from the above trials was not, however, of long continuance. The inoculations at Boulogne succeeded, and from them Dr. W. was supplied with matter, at Paris, which fully answered his expectations. Dr. Colon's only child was the first person he inoculated at Paris; and other medical men, in order to testify the confidence they placed in the new inoculation, followed the example; so that Dr. W. had the satisfaction to see the practice extended not only among the children in different hospitals, but also in private families in Paris, where, no doubt, it will soon become general. At Boulogne the Cow-pox inoculation has been continued by Doctor Nowell, who lately transmitted to Paris a report of the numbers to whom he had communicated the infection. With the vaccine matter which Dr. Pearson sent to Paris, thirty children had been inoculated, of whom ten took the disease; from these ten, only five others were infected, when all further attempts to propagate the Cow-pox entirely failed, and the *matter* was lost several weeks before Dr. Woodville's arrival at Paris.

Dr.

Dr. WATERHOUSE, Profeſſor of Phyſic at Cambridge, in New England, in a letter dated the 4th of Auguſt, 1800, to a friend at Bath, communicates the following information:

"Accept my beſt thanks for the phial of vaccine poiſon. Its activity I have experienced on my neareſt connections. I have inoculated five of my own family, and roufed the public attention even beyond what I had imagined. The ſymptoms and the appearance in the inoculated part were exactly ſimilar to thoſe deſcribed and pictured by Dr. Jenner. I ſhall try the variolous matter on them in a week or two. I conſider this as a very important thing to my country, where the dread of the Small-pox is ſtill great.

"I have ventured to give a new name to the vaccine diſorder. I obſerve that people revolt at the term Cow-pox, I have therefore changed it to *Kine-pox*, from kine the plural of cow. As I am the only one in America who has publiſhed any thing on that new diſorder, I am in hopes to eſtabliſh that name inſtead of the former. If it ſhould obtain, I can foreſee, than the *c* will in time be changed into *d*."

The vaccine matter ſent to America was taken from a patient at Bath, ſeveral months before it was employed with effect at Cambridge, in New England.

Dr. JAMES GREGORY, of Edinburgh, has juſt printed a Memorial to the patrons of the Infirmary, or Public Hoſpital, of that city; in which he propoſes, that the ſurgeons of the inſtitution ſhall in future be permanently attached to it; and points out many diſadvantages attending the preſent mode, in which all the reſident ſurgeons of the College ſerve in the Infirmary by rotation. In this memorial, he enters deeply into the conſideration of certain differences ſubſiſting, at preſent, among the ſurgeons of Edinburgh, and introduces many intereſting anecdotes in the medical hiſtory of that celebrated ſchool.

The late Dr. KIRKLAND has left a valuable manuſcript, compriſing his third volume of Medical Surgery, which is intended to be publiſhed by his ſon, Mr. J. Kirkland, who practiſes as a Surgeon at Aſhby de la Zouch.

Mr. NOBLE, ſurgeon in Birmingham, will, in a few weeks, publiſh Part II. of a Treatiſe on the Ophthalmy, and thoſe diſeaſes which are induced by Inflammations of the Eyes, with methods of cure conſiderably different from thoſe in common uſe; to which will be ſubjoined, an Enquiry into the Powers and Efficacy of many Applications, which are generally eſteemed, and had recourſe to, in different diſeaſes of the eyes. The ſucceeding part will be prepared for the preſs as ſoon as poſſible.

Dr. CARSON, practitioner in Midwifery, of the ſame town, is engaged in a ſmall work on the Treatment of Pregnant Women,

men; in which it is his intention, principally to point out the moſt probable and advantageous means of preventing abortion.

Dr. WILLAN will ſpeedily publiſh Obſervations on the Diſeaſes of London, during the years 1796, 7, 8, 9, and part of 1800, accompanied with Meteorological Tables, and with a great variety of practical and important information.

Mr. JOHN BELL has made great progreſs in a work on *Military Surgery*, that has been for ſome time earneſtly expected from him. It will probably fill two volumes in 4to. which will contain many illuſtrative engravings. Its publication will be early in the enſuing year.

Dr. ALEXANDER THOMSON has in the preſs, a familiar work on the cure and prevention of diſeaſes. He propoſes to include every uſeful fact contained in Tiſſot, Buchan, Wallis, Parkinſon, and other popular writers, with the improvements and recent diſcoveries; and he is printing it in a ſmall type and ſize, that it may be ſold at a moderate price.

STATE OF DISEASES IN LONDON.

Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20th of Auguſt to the 20th of September, 1800.

	No. of Caſes.		No. of Caſes.
ACUTE DISEASES.		Inteſtinal Hæmorrhagy	2
Typhus	7	Amenorrhœa	5
Dyſenteria	8	Menorrhagia	4
Cholera Morbus	17	Hemiplegia	3
CHRONIC DISEASES.		Lumbago	4
Cough	12	Chronic Rheumatiſm	10
Cough with Dyſpnœa	5	Herpes	12
Pertuſſis	2	Tinea	1
Hæmoptyſis	3	Papulous Eruptions	16
Hoarſeneſs	1	PUERPERAL DISEASES.	
Phthiſis Pulmonalis	4	Dolores Poſt Partum	7
Catarrhus	3	Maſtodynia	2
Gaſtrodynia	9	Menorrhagia Lochialis	3
Dyſpepſia	8	INFANTILE DISEASES.	
Diarrhœa	20	Diarrhœa	15
Colica Pictonum	3	Herpes	12
prolapſus Ani	2	Aphthæ	4

The ſeveral ſpecies of inteſtinal diſeaſe, which conſtituted ſo large a proportion of the liſt, in the report of the laſt month, ſtill continue to prevail. Children as well as adults have been much affected by them, and in many caſes they have proved very obſtinate.

Account

Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20th of September to the 20th of October.

	No. of Caſes.
ACUTE DISEASES.	
Typhus	14
Peripneumony	5
Pleuriſy	3
Small-pox	6
Dyſentery	10
CHRONIC DISEASES.	
Cough	15
Cough with the Dyſpnœa	12
Hæmoptyſis	6
Pleurodyne	4
Phthiſis Pulmonalis	8
Catarrh	2
Diarrhœa	22
Enterodynia	6
Colica Pictonum	1
Hypochondriaſis	5
Hyſteria	4
Chloroſis	3
Fluor albus	7
Amenorrhœa	9
Menorrhagia	2
Hemiplegia	2
Cephalalgia	5
Vertigo	4
Chronic Eruptions	15
Chronic Rheumatiſm	10
PUERPERAL DISEASES.	
Low Puerperal Fever	3
Convulſions	1
Maſtodynia	4
INFANTILE DISEASES.	
Diarrhœa	12
Herpes	4
Aphthæ	3

Diſeaſes of the bowels, which have formed ſo large a proportion of the liſt in the late reports, ſtill prevail very generally. Cholera, which a few weeks ago was ſo very frequent in its attacks, and ſo obſtinate and alarming in its ſymptoms, has not lately occurred; but Diarrhœas or Dyſenteries, in a ſlighter or more formidable manner, have viſited almoſt every family. In many caſes where it has not conſtituted the primary diſeaſe, *diarrhœa* has been an attendant ſymptom; and ſo general indeed has its appearance been, that it might be ſaid to blend and connect itſelf with almoſt every diſeaſe. It ought not to be concealed, that in ſome inſtances it has proved highly ſalutary, and ſeems to have been the means which nature deſigned to employ in order to effect a cure. It is the more proper to mention this, ſince there is generally a ſtrong deſire on the part of the patient and his friends, too haſtily to counteract this ſalutary proceſs. In two or three caſes of incipient phthiſis, during a copious inteſtinal diſcharge, the cough was much relieved, and the difficulty of breathing conſiderably diminiſhed.

Inſtances of typhus are numerous. They are in general of the milder ſpecies. The determination to the head is leſs violent, and the delirium leſs frequent than in former caſes.

By a ſtatement taken from the Bills of Mortality, and ſubjoined to this report, it appears that the Small Pox has proved uncommonly fatal. The unuſual heat of the weather may be conſidered as one cauſe of this phenomenon. We will venture a conjecture, whether or not, in ſome inſtances, a long protracted heſitation, which of the two modes of inoculation to prefer, the variolous or the vaccine, has not expoſed the party to the infection of the NATURAL Small Pox, and contributed to the great degree of fatality which has attended the diſeaſe.

The

The Deaths in the Bills of Mortality for the last three months are stated as follow:

Abscess	8	Jaundice	17
Abortive	10	Inflammation	117
Aged	281	Lunatic	24
Apoplexy	15	Measles	46
Asthma	56	Mortification	58
Cancer	10	Palsy	31
Child Bed	35	Pleurisy	8
Consumption	1060	Small Pox	848
Convulsions	951	Still Born	90
Croup	4	Suddenly	23
Dropsy	163	Teething	72
Fever	675	Thrush	5
French Pox	4	Water in the Head	15
Gout	28	Worms	5
Hooping Cough	44		

Diseases admitted under the Care of the Physicians of the Westminster Hospital, from the 20th of August, to the 24th of September, 1800.

Continued Fever	23	Erythema	1
Intermittent	1	Gastrodynia	5
Sore Throat	2	Hæmoptysis	1
Splenitis	1	Hooping Cough	1
Amenorrhœa	6	Itch	2
Anasarca	3	Jaundice	1
Ascites	2	Leucorrhœa	1
Asthenia	4	Lumbago	1
Cephalæa	3	Menorrhagia	1
Chlorosis	3	Paralysis	1
Cholera	7	Pleurodynia	1
Colic	1	Somnambulismus	1
Cough	5	Rheumatism	5
Diarrhœa	4	Sciatica	1
Dysentery	1	Struma	2
Dyspepsia	3	Urticaria	1
Dyspnœa	1	Tinea	1
Enterodynia	4	Vomiting	1

Diseases admitted under the Care of the Physicians of the Westminster Hospital, from the 24th of September to the 22d of October, 1800.

Continued Fever	15	Ascites	2
Intermittent	1	Asthenia	
Pleurisy	1	Catarrh	3
Amenorrhœa	3	Cephalæa	1
Anasarca	3	Colic	1

Cough

Cough	9	Lumbago	1
Diarrhœa	12	Menorrhagia	1
Dyspepsia	2	Phthisis	3
Dyspnœa	1	Pleurodynia	1
Dysuria	2	Pleurigo	1
Enterodynia	1	Rheumatism	7
Epilepsy	1	Struma	2
Hæmatemesis	1	Vomiting	2
Lepra Græc.	2	Worms	2
Leucorrhœa	1		

NEW MEDICAL PUBLICATIONS IN OCTOBER.

A Treatise on Febrile Diseases, including intermitting, remitting, and continued Fevers; eruptive Fevers; Inflammations; Hæmorrhagies and the Profluvia; in which an attempt is made to present, at one view, whatever in the present state of medicine it is requisite for the Physician to know, respecting the symptoms, causes, and cure of those diseases. By A. Philips Wilson, M. D. F. R. S. Ed. &c. 8vo. 9s. Cadell and Davies, Callow, &c.

A View of the most important Facts which have appeared concerning the Inoculation for the Cow-pox, by C. R. Aikin, Surgeon, with a coloured Plate, representing the Pustules in different Stages, 2s. 6d. Phillips.

An Appendix to the Treatises on the Cow-pox, being a Continuation of Facts and Observations relating to that Disease, by Edward Jenner, M. D. 2s. 6d. Low.

The Hospital Pupil's Guide, with Anecdotes relative to the History and Economy of Hospitals, 2s. West and Hughes.

A concise View of Circumstances and Proceedings respecting Vaccine Inoculation, &c. 2s. Hurst.

The Naval Guardian, by Charles Fletcher, M. D. Author of "A Maritime State considered as to the State of Health of Seamen, &c." 2 vols. 14s. boards. Chapman.

NEW MEDICAL PUBLICATIONS IN FRANCE.

Memoires de Medicine Pratique, &c. i. e. Memoirs of Practical Medicine; on the Climate and Diseases of the Mantouan Territory, on Peruvian Bark, on the frequent Causes of Chronic Diarrhœas in young Soldiers, and on the present Epidemic of Nice. By F. E. Foderé, D. M. 1 vol. 8vo. year 8, 1800, à Paris.

Traité de Membranes, i. e. Treatise on Membranes in general, and on different Membranes in particular. By Xavier Bichat, of the Society of Medicine, &c. 8vo. year 8. Paris, chez Richard, &c.

Leçons d'Anatomie comparée, &c. i. e. Lectures on Comparative Anatomy of Cit. Cuvier, of the National Institute, &c. Collected and published under his inspection by Cit. Dumeril, &c. 2 vol. in 8vo. pp. 500, enriched with engravings. Paris, for Baudouin.

NEW MEDICAL PUBLICATIONS IN GERMANY.

Die Werkzeuge, i. e. The Instruments of Ancient and Modern Obstetric Art. By B. N. G. Schreger, Prof. at Erlangen. T. 1. fol. 1799. Erlangen, for Palm. Price 1 rixd. or about 3s. 6d.

Soemmering Tabulae baseos Encephali. Fol. Frankfort, 1800, price 2 rixd. 12 gr. or about 9s. 6d.

Archiv fur Zoologie, i. e. Archives for Zoology and Zootomy, publiſhed by Wiedeman, Prof. at Brunſwic, Vol. I. No. 1. with plates, 1800. Berlin, for Voſs 8vo. price 2 rixd. or about 3s. 6d.

Annalen, i. e. Annals of the lateſt Engliſh and French Surgery and Midwifery; edited by Prof. SCHREGER and HARLES, Vol. I. No. I. II. III. with plates, 18-0, price 18 groſchen, or about 2s. 6d. each number. Erlangen, Schubart.

C. W. Bockmann's Phyſiche Chemiſche Verſuche, &c. i. e. Phyſico-Chemical Experiments on Phoſphorus in different Species of Gaſes, particularly in Azote and Oxygen Gas, with a Preface, and ſome Notes of Prof. Hildebrandt; with plates, 1800, 8vo. price 1 rixd. 12 gr. or about 5s. Erlangen, Schubart.

Callisen Henr. Principia Syſtematis Chirurgiae Hodiernae, Parspoſterior, edit. nova, 1800, price 2 rixd. 8 gr. or about 8s. Hafnia, Proft.

Karſten's, L. G. Mineralogiſhe Tabellen, i. e. Mineralogical Tables, compoſed according to the lateſt Diſcoveries, fol. 1800, price 1 rixd. 8 gr. or about 5s. Berlin, Rottman.

Links, J. W. Grundalze der Pharmazie, &c. i. e. Elements of Pharmacy, together with its Hiſtory and Literature, 8vo. 1800, Vol. I. p. I. et II. price 3 rixd. or about 10s.

Ophthalmologia Pathologica, S. de Cognoſcendis et Curandis Organi viſarii Affectionibus Liber. Sect. I. 8vo. 1800, price 20 gr. or about 3s. Lipſiae, Fleiſher, jun.

Retzii, A. T. Fauna Suecica, 8vo. 1800, price 1 rixd. 12 gr. or about 5s. 6d. Lipſiae, Cruſius.

To CORRESPONDENTS.

Dr. BRADLEY, *to whom alone the whole blame is imputable, perceived, immediately after the publication of the laſt Number, the impropriety of inserting Dr. Nisbet's Case, which introduced the names of regular Practitioners in that form. He therefore, early in October, wrote a Note to Dr. N. of whom he had not the slightest knowledge, requesting an account of the preſent state of his Patient, and his Plan of Treatment. The following is his answer, and the Public will observe how far it is from being satisfactory.*

ST. JAMES's STREET, 26th *October*, 1800.

" Dr. Niſbet returns Compliments to Dr. Bradley.—The Patient " has been ſeen ſince Dr. B. wrote his Card by Dr. Garthſhore, by " Mr. Blair, ſurgeon, by Dr. A Buchan, and by Mr. Taylor, " Great Ruſſell Street, who have deſired Dr. Niſbet to uſe their " names in anſwer to the firſt part of his Card.

" On the means of cure, Dr. Niſbet has given a ſhort hint in the " ſtatement of the caſe, and a farther illuſtration of his principles " will be ſeen in his appendix to his Treatiſe on Cancer, being a " letter to Dr. Gregory on the ſubject. He has alſo given a pro- " miſe of a farther detail, ſo ſoon as ten or twelve caſes ſhall be " completed and publiſhed. Till then he conſiders any obſerva- " tions as premature."

Communications have been received from Meſſrs. Watt, Sergeant, Caldicott, Cowley, Waker, a Conſtant Reader, &c. which ſhall be attended to as ſoon as poſſible.

Medical Journal, N

THE

Medical and Phyſical Journal.

VOL. IV.] DECEMBER, 1800. [NO. XXII.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IF you think the encloſed caſes deſerving of a place in your uſeful Medical Journal, you will do me the favour of inſerting them. If there are any queſtions you wiſh to aſk concerning them, I ſhall be very happy to give you any information in my power. I am,

GENTLEMEN,

Stoke Ferry, Norfolk, Nov. 6, 1800.

Your moſt obedient ſervant,
H. H. HELSHAM, M. D.

CASES of DYSPHAGIA.

[With Engravings.]

CASE I.

An account of the diſſection of a woman, aged 65 years, who had been ſubject, for five years preceding her death, to a ſickness and reaching, and a ſensation of pain in ſwallowing in the track of the ſpine and œſophagus; in a letter to Dr. HAMILTON, *of Lynn.*

DEAR SIR, *Stoke, April 1, 1792.*

Our patient, Mrs. Godman, lingered out till Thurſday laſt. For the laſt fortnight, I dare ſay, ſhe ſcarce ſwallowed any thing; and, for about that time, the ſpitting and expectoration of mucus had ſtopped. She was incapable of ſpeaking for the laſt four or five days, but retained her ſenſes to the laſt moment, though her pulſe had not been perceptible for two days.

We obtained leave to open the body, which my ſon did yeſterday.

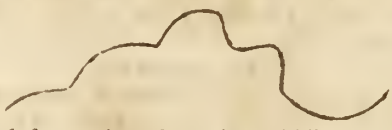
Upon laying open the cavity of the abdomen, and feeling in the ſituation of the ſtomach, we were ſtruck with the appearance of ſome protuberant ſwelling behind it; but as we wiſhed firſt to make a careful examination of the track of the œſophagus, he proceeded to the examination of the thorax and neck,

and diſſected the œſophagus and ſtomach carefully out from their ſituation; previous to which a probang was paſſed down into the ſtomach, which met with no impediment whatever.

When the ſtomach and œſophagus were diſſected out, he laid them open, and not the leaſt veſtige of diſeaſe, neither ſtricture, ſchirrus, ulceration, or even abraſion of the internal coat, appeared in either.

We now ſought for the enlargement which occaſioned the particular feel behind the ſtomach and viſcera.

This was no other than the ſpine itſelf, which formed a ridge from the neck to the laſt vertebræ of the back, and had more the feel of the ſpinal proceſſes of the back than the bodies of the vertebræ. Inſtead of the uſual form of the bodies of the vertebræ, as thus the following was the form of them:



and the depth of the cavity, from the middle of the bodies of the vertebræ to the poſterior arch of the ribs, was at leaſt five inches.

The protuberance was greateſt about the ſeventh vertebræ of the back, where the œſophagus paſſes through the diaphragm.

The liver and all the viſcera appeared ſound, the omentum was very thick and large, but did not appear ſchirrous.

There were two biliary concretions in the gall bladder the ſize of a large nutmeg each.

How far will this particular form of the ſpine account for the ſymptoms ſhe had been ſubject to for five years?

CASE II.

R. C. Eſq. aged 79, had been affected for twenty years paſt with Dyſphagia, which was ſuppoſed to have been firſt occaſioned by his eating a morſel of hot pudding, which, by excoriating the inſide of the œſophagus, might have given riſe to ſtricture, or fungus excreſcence in the part.

For the laſt two or three years of his life I had frequent opportunities of being at table with him, and from the obſervation I then made on his manner of ſwallowing, and what I ſaw during the week preceding his death, I could by no means think that either ſtricture or fungus ſufficiently accounted for it.

Excluſive of the difficulty of ſwallowing, in the firſt inſtance, he would ſome time afterwards (perhaps ten or fifteen minutes) regurgitate part of his food or drink back again, which ſeemed to have lodged ſomewhere in the paſſage.

Excepting

Excepting the difficulty of ſwallowing, he had enjoyed a very good ſtate of health, was of a fair, florid complexion, and rather inclining to corpulency.

In January, 1792, the difficulty of ſwallowing increaſed to ſuch a degree, as almoſt totally to prevent any nouriſhment being received into the ſtomach; and, for the laſt ten days of his life, he was ſupported by broth clyſters, and at length gradually ſunk from inanition.

During the laſt week of his life he would frequently, to appearance, ſwallow more than four ounces of liquid at a draught, which would remain ſometimes for five or ten minutes, and then be regurgitated back again.

Permiſſion being obtained to open the body; after removing the larynx, pharynx, trachea, and œſophagus, an enlargement or protuberance of the body of the fifth vertebra of the neck, which projected above half an inch over the body of the ſixth vertebra, appeared to be the original cauſe of the complaint, by producing the ſtricture in the œſophagus. This bony projection did not ſhow any mark of diſeaſe further than its enlargement.

The effort of ſwallowing had gradually produced a dilatation of the pharynx behind the œſophagus, and underneath the projecting body of the vertebræ, forming a ſac which would contain about four or five ounces, into which part of the food or drink eſcaped, and remained for ſome time, till by its irritation it produced an effort to reject it.

The annexed figures ſhew the parts after they had been prepared, and immerged in ſpirits.

Figure I. A back View of the Preparation.

A. The trachea.
B. The œſophagus.
C. The epiglottis.
D. The back part of the pharynx, cut open to ſhew
E. The ſtricture oppoſite to the protuberance of the vertebra.
F. The ſac, or bag, formed behind the œſophagus.

Figure II. A View of the Preparation on the left ſide.

A. The trachea.
B. The œſophagus.
C. The epiglottis.
D. The thyroid cartillage.
E. The cricoid cartilage.
F. The os hyoides.
G. The ſac, or bag, hanging down behind the œſophagus.

CASES of ISCHURIA.

CASE I.

E. S. a corpulent man, aged 67 years, had been ſubject for ſome years to frequent and ſevere attacks of the gout, and nephritic complaints, and had, at different times, voided ſeveral calculi,

calculi, was taken, on Tuesday, July the 22d, with suppression of urine.

I was called to him first on Wednesday the 23d, when he had made only one spoonful of urine since yesterday; I ordered him a bolus with opii gr. j. calomel. ppt. camphor aa. gr. v. to be taken immediately, and to be repeated at bed-time; and a mixture with oleum ricini to be taken in the morning.

He had no pain, no inclination to void urine, no fulness or tension in the bladder, nor any tenderness upon pressure on the hypogastrium, but complained of a heavy dull sensation in his loins; no thirst or fever; pulse 67, and regular.

Thursday, 24th. No stools; no urine. Rept. mistura aper.

Friday, 25th. Has had stools, but passed no urine. Applicetur emplast. vesicatorium regioni renum. Rep. bolus h. s.

Saturday, 26th. Capt. cochlear iij. julep; cum spt. nitros. æther 3 ia. vel 4 ta. quaq. hora. Rept. bolus h. s. Cras mane rept. mistura aper.

Sunday, 27th. He was electrified by passing sparks through the region of the kidnies with the large balls of Nairne's patent electrical machine, for some minutes, and afterwards passing three small shocks through the loins. Rept. bolus h. s. Cras mane rept. mistura aper.

Monday, 28th. Electricity repeated. He expresses himself to have received a comfortable sensation from it, as if a weight was removed from his loins. He vomits frequently a green acrid fluid. Rept. bolus h. s.

Tuesday, 29th. The catheter was introduced; no water in the bladder. Electrified again, and vomited immediately after. Bowels regular.

Wednesday, 30th. Two small blisters were again applied to the region of the kidnies. Rept. bolus h. s.

Thursday, 31st. Would not be electrified any more, as it made him vomit. He is very lethargic; pulse 57. Rept. bolus h. s.

Friday, August 1st. Was put into a warm bath for a quarter of an hour. Bowels regular.

Saturday, 2d. Continues the same, except that his lethargic symptoms increase; falls asleep while conversing in an erect posture. Pulse low and languid.

Sunday, 3d. About noon he passed four ounces of urine perfectly clear, after a total suppression for thirteen days, and afterwards passed a stone, the size and form of a small kidney bean, without the least pain or knowledge of it, till he heard it fall into the chamber-pot.

Monday, 4th. Has voided urine plentifully, of a good colour, without the least pain or inconvenience. Has vomited

once

once this morning, and is rather languid; bowels regular. Rept. bolus ſ. h. cum calomel. gr. iij.

Tueſday, 5th. Has paſſed ſome more ſmall ſtones; vomited this morning.

From this time he continued to void his urine regularly; and on Saturday, the 9th, paſſed a ſtone larger than the firſt. From that time he has advanced in his recovery, and is now, November 4, perfectly well.

CASE. II.

Friday, Sept. 26, 1800, my ſon was called to Tho. Wells, of Foulden, an old man of 70 years of age, who had had a total ſuppreſſion of urine from the Sunday preceding.

On examining the abdomen, the bladder was found diſtended up to the navel; and, on attempting to paſs the catheter, he could not get it further than the membraneous part of the urethra, where it was plainly felt by the finger introduced into the rectum.

The bladder was puſhed down into the rectum, and behind its own neck, like the retroverted uterus, and was very plainly the obſtacle to the introduction of the catheter.

He was bled, and took a bolus with opii gr. j. calomel camphor aa. gr. iij. at five o'clock, and again at bed-time; and had an opening mixture, with oleum ricini, to begin in the morning.

Saturday, the 27th, our friend, Mr. Roberts, of Swaffham, met us, and all our endeavours to paſs the catheter proving fruitleſs, my ſon perforated the bladder through the rectum.

As the common trocar would not reach the bladder, he made uſe of Pott's trocar needle and canula, for paſſing the ſeton in the radical operation for the hydrocele.

The catheter being introduced into the urethra as far as it would paſs, he guided the inſtrument upon his finger in the rectum, to the protruding bladder, and plunged it into it.

On withdrawing the needle, three pints of urine paſſed through the canula, when it ſtopped; but trying to puſh forward the catheter, it immediately paſſed into the bladder, and three pints more of urine flowed through the catheter.

Sunday, the 28th. He had paſſed full two quarts of urine by the urethra, which was tinctured with blood; but none had paſſed through the rectum, nor did any afterwards paſs that way.

Monday, the 29th. He had a free paſſage through his bowels, and continued for ſome days to make a large quantity of urine.

The wound in the rectum and bladder healed by the firſt intention, and he gradually recovered, and continues to this time, November 4th, perfectly well.

On the medicinal Efficacy of Sulphuric Acid.

To the EDITORS of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

CHRONIC eruptions on the cuticular surface are well known to form a frequent, and occasionally a very distressing malady; they also assume various appearances, present different degrees of inveteracy, and often prove irremediable under the most approved mode of treatment. This practical difficulty has rendered me invariably pusillanimous in my opinion of the issue of those complaints; and experience of the insufficiency of the usual practice, has obliged me successively to combat the disorder with different agents, before even an apparent cure could be effected, which, in the majority of instances, has been ultimately evinced to have been a temporary suspension only, and not a real extinction of the disease. The warm bath, the internal and external use of a solution of the corrosive muriat of mercury, antimonials, guaiacum, &c. have, separately and conjointly, failed in producing the desired effect. Nor has the nitrous acid, under my direction, justified the reputation given to it, or in any instance proved permanently salutary. The chemical explanation which has been recently given to the medicinal efficacy of various oxydated and oxygenated preparations, particularly the oxides of quicksilver, by ascribing the agency exerted to the oxygene in combination; and also the popular esteem in which sulphur is held against eruptive disorders, induced me to give an extensive trial to Sulphuric Acid, as probably possessing, in concentrated combination, the separate powers of its constituent principles. It is with heart-felt satisfaction that I have now to detail how far my expectations have been realised.

1. A child, about three years of age, had been upwards of twelve months affected with eruptions, which originated on the face, and were soon spread over the cuticular surface, rather in partial clusters than in equal distribution. This eruption had its stages of rise, progress, and declension: It began with an inflammatory aspect, accompanied with preternatural heat and itching, and terminated in a furfuraceous disquamation. This course was usually completed in about a fortnight, and resumed at short but irregular intervals. Various medicines had been exhibited, but what they were could not be distinctly learned; no lasting relief, however, had resulted from them.

them. This patient was directed to take ten drops of the sulphuric acid in a tea-cup full of pure water three times a day, and to have the eruptions washed as often with a solution of the same acid in water, in the proportion of one drachm of the former to one pint of the latter. This was performed by dipping a small piece of linen in the liquid, and moistening with it the parts affected. The external application was at first productive of severe pain, but this inconvenience daily diminished. The drops rested well on the stomach; in the course of a week much amendment was apparent, the eruptions were much subsided, and felt and appeared hard and scurfy, but the intermediate sound skin continued highly reddened. The curative progress advanced uninterruptedly, and in three weeks from the commencement of the treatment, the little patient was comparatively well; the blotched relicks also soon became considerably effaced; and at this time, now upwards of four months, the child remains perfectly free from complaint.

No other medicine was administered during the employ of this remedy; indeed, the general health was speedily raised from a very languid and irritable state to a more robust and tranquil condition. The appetite became craving; the several evacuations were regular; and that by cuticular perspiration was sensibly increased. To this latter circumstance may be attributed the little inconvenience induced by the inflammatory redness excited on the skin by the lotion; the increased evaporation of perspirable matter transferred redundant heat, and salutarily refrigerated the preternatural temperature.

2. A man of a robust temperament, aged about 30 years, by trade a shoe-maker, had been for six months grievously afflicted with an excoriation of almost the entire cuticle of both legs. In some parts, small, destructive ulcerations had reached the muscular structure, and a morbidly decomposing process appeared to be spreading in every direction over the affected limbs, yielding a vast discharge of thin fœtid fluid. This complaint was formally limited to the lower extremities, but a sympathetic itching was propagated over the whole cuticular surface. The general health had not been sensibly affected. Thirty drops of sulphuric acid were directed for this patient, to be taken in half a pint of cold water, gradually extending the dose to one tea-spoonful, if not contra-indicated by any forbidding occurrence, such as nausea or purgation. A sulphuric acid lotion, of the strength before-mentioned, was also ordered to be applied by means of a bandage, wetted in the liquid, and rolled tightly, by equal and progressive rounds, from the feet to the knees. The drops produced no inconvenience; the lotion induced exquisite pain; but this appeared to be the effect

of

of an impreſſion that had promptly deſtroyed the diſeaſed action; a high degree of inflammatory redneſs and tenſion enſued, but which was readily controlable by the application of cold water. A purely aqueous fluid, (coloured for the ſake of diſguiſe) was now ſubſtituted, in which the bandages formerly wetted in the ſulphuric acid lotion, were ordered to be moiſtened, and applied in a ſimilar manner, renewing them as ſoon as either dry, or a ſenſe of diſeaſed heat recurred.

This procedure diſſipated the tenſion, pain, and redneſs within two days, and its continued uſe, conjoined with the gradually augmented doſes of the acid, during about ten days, nearly effected a cure. A dry ſcurf on the legs exhibited the only remaining veſtige of this inveterate diſeaſe.

The ſmall ulcerations, as before remarked, on different parts of the legs ſpeedily changed their ill conditioned aſpect, and healed with rapidity.

The ſulphuric acid was in this caſe taken to the extent of two tea-ſpoons full three times a day, conjoined with a ſmall proportion of opium, to obviate a purgative effect which it had previouſly produced. It is worthy of notice, that at one period this patient was highly ſalivated by the acid, the pulſe alſo was quickened ſimilarly to what uſually occurs under the higheſt ſyſtematic operation of mercury. This effect, however, ſubſided much more ſpeedily on ſuſpending the acid, than ordinarily happens when reſulting from mercury. Three days diſcontinuance of its uſe was followed by an entire ceſſation of the ptyaliſm. The relief obtained in this caſe was a complete removal of morbid action, that had advanced to an ulcerative proceſs, and which appeared to be moſt virulently circumſtanced. It had reſiſted the ordinary attempts of regular, and the extraordinary endeavour of irregular practice.

Two months are now elapſed ſince the commencement of this treatment; the affected parts continue perfectly well, with the exception of occaſional itching and a ſenſe of morbid heat, which have at length been nearly ſubdued by plunging the legs, every morning and evening, in cold water as high as the knees, keeping them in that ſituation about one minute, and then rolling them as before-mentioned with a bandage ſqueezed from cold water.

This ſudden and conſtant mode of reducing the diſeaſed heat, promiſes ultimately to correct the vitiated proceſſes on which its generation depends, and to re-eſtabliſh the ſalutary temperature.

3. A ſtout yeoman, aged about 25, requeſted my advice for an obſtinate eruption on his right arm, which had exiſted about two months. Its origin was confined to a few confluent puſtules,

tules, which ſpeedily ſpread, by contiguous extenſion, over the whole upper ſurface of the arm. At the time of his firſt application, this puſtular affection had a very loathſome and inveterate aſpect; its general ſuperficies was much above the level of the cuticular ſurface, and its centre was elevated into a ſuppurative protuberance, from whence oozed, as from other parts of it, a thin ſanguineous ſanies, not ſtrikingly offenſive.

In this caſe the ſulphuric acid was employed both internally and externally, as before ſpecified, with the difference only of reducing the quantity of the acid in the lotion to the proportion of half a drachm to one pint of water. This alteration was a meaſure of precaution, taught both by the pain induced in the former caſe, and the highly diſeaſed temperature prevailing on the whole arm. No ſort of inconvenience aroſe either from the internal or external uſe of the acid thus managed, and within three weeks the patient was diſmiſſed perfectly cured. Complete diſquamation of the unſightly groupe of puſtules had occurred, and the ſubjacent cuticle was ſmooth, ſoft, and flexile.

4. A young woman, under the preſſure of much conſtitutional debility and morbidly high temperature, had been nearly eighteen months incommoded by large diſtinct eruptions on different parts of the body, appearing and diſappearing at irregular intervals; a large puſtule on one of the legs at length ulcerated, and ſpread by rapid decompoſition of the contiguous parts to great extent and conſiderable depth; the attendant irritation was extremely acute, and marked by a high degree of ſurrounding tenſion, inflammation, and even veſication; the ſenſe of heat was, to uſe the patient's term, ſo intenſely burning, as to leave no doubt of exceſſive temperature conſtituting the chief ſource of the diſtreſs. Conformably to this opinion, I directed it to be reduced, by enveloping the limb in a cloth wetted with cold water, and renewed every half hour. The advice was ſedulouſly purſued, and the alleviation in the courſe of the ſame day was incredibly great and durable; the ſenſe of burning was exchanged for grateful warmth. On the ſubſequent day, the altered aſpect of the limb ſtrikingly evinced the ſalutary reduction of heat which had been effected, but the ulcerated ſurface continued of a dark mottled hue. The ſore was now directed to be dreſſed every morning and evening (after waſhing it with cold water) with an ointment compoſed of half a drachm of ſulphuric acid and one ounce of hog's lard, and the leg to be afterwards bound from the foot to the knee with a ſuitable bandage dipped in cold water. The ſulphuric acid was alſo taken by progreſſive augmentation, as in the former caſes, and to an equal extent, but without any affection of the ſalivary glands enſuing from it.

The ſalutary effects of the treatment in the patient under conſideration, even exceeded any thing that ever occurred to me to obſerve from the moſt efficacious remedies. Within three weeks this highly diſtempered young woman was unfettered from her noiſome malady, walked to my houſe, (a diſtance of three miles) without halting, fatigue, or an eruption, and with no other trace of her former corroding ulcer, than a ſuperficial cicatrizing ſore, of very inconſiderable dimenſion, and which I have ſince learned is now perfectly healed.

Among ſeveral other inſtances of ſubordinate importance, I may relate two others, which have as unequivocally, in my eſtimation, eſtabliſhed the ſuperior efficacy of the ſulphuric acid, in the cure of cuticular eruptions, as either of thoſe which have been recited; but a more extenſive narrative would occupy more of your time and room than can be reaſonably preſumed on. If what has been advanced in favour of the particular curative powers of this remedy ſhould be deemed ſufficient to entitle it to a full inveſtigation of its poſſible efficiency, my object in ſubmitting to public conſideration the ſucceſs of my experience will be amply accompliſhed. It may, however, be proper to add, that the ſalutary influence of the treatment deſcribed has been ſo uniformly apparent in all the caſes in which it has been employed under my direction, that it remains for me yet to learn an exception to its efficacy. It may be obſerved, that in the management of the preceding caſes, the prevailing temperature, as indicated by the *patient's ſenſations*,* was a leading object of attention. This regard proceeded from an opinion which has been long indulged by me, that all eruptive diſorders and ulcerative proceſſes, in common with every variety of febrile affection, are eſſentially connected with motions of the animal principles of life, that generate exceſſive heat, which in its turn produces morbid actions and ſenſations. Conſonant to this doctrine, I have attempted the cure of eruptive complaints by the external application of cold water and the refrigerating influence of increaſed perſpiration, and in ſome inſtances effects highly beneficial have by this mode been produced; but on moſt occaſions the *habit* of morbid action has not vaniſhed with the reduction of the diſeaſed temperature: hence an agent appeared to me to be wanting, that by affecting the exiſting

* The feelings of the patient, with reſpect to temperature, have ſerved me as a much more accurate guide than the indications afforded by thermometrical menſuration. This ſeeming preference, however, may not be well founded, but be aſcribable to my thermometer not poſſeſſing ſufficient mobility to exhibit, with ſuitable preciſion, the diverſified range of the prevailing heat.

exiſting affinities which hold the principles of animal ſtructure in vital combination, a ſalutary change might be induced from thoſe morbid conditions of motive power, that at once conſtituted and actuated the prevailing diſeaſe.

The ſulphuric acid has hitherto proved, in my experience, fully competent to this effect; but whether its efficacy be due to the ſpecific chemical virtue of its oxygenous principle, its conſtituent combination, or to its more general ſtimulant properties, is exceedingly problematical.

No ſufficient documents have yet been furniſhed, either experimentally, inductively, or analogically, on which might be ſatisfactorily reſted an explanation, either how medicinal impreſſions are made, or how the power imparted is incorporated and appropriated. The recondite operation of the animal œconomy, in converting and aſſimilating matter, and thereby generating ſpecific power and efficiency, is yet but dimly perceived by *Chemical Physiology*, which, unqueſtionably, conſtitutes the only legitimate mode of reſearch. Extenſion of facts promiſes progreſſively to illuſtrate the view, and ultimately to unveil the latent ſimplicity of native truth. I am,

GENTLEMEN,

Yours, very reſpectfully,

Chilton ſuper Polden,
Nov. 12, 1800.

ROBERT KINGLAKE.

P. S. In your laſt Number is a Comment on a former Paper of mine, relative to Parturition and the Delivery of the Placenta,* by a Mr. S. THOMAS. I muſt be very brief in anſwer to an opponent, who appears to have attacked my opinion without examining or regarding the grounds on which it reſts. He has ſummarily replied by ſuſpecting my *practical familiarity* with natural labour, though the doctrine advanced in the paper in queſtion, is diſtinctly ſtated to have been ſuggeſted by *ample experience.*

It muſt, on reflection, occur to your correſpondent, that ſuch unqualified diſtruſt is a breach of decorum, equally incompatible with ſocial urbanity and philoſophical argument. I will only trouble you to make known to Mr. S. Thomas, that my opportunities for practical information have been ſufficiently extenſive and diverſified, to warrant me in exerciſing an independent judgment on the ſubject of parturition; that I might alſo boaſt of having duly profited by the tuition of the preceptors whom he has cited; that, were it neceſſary, innumerable examples might be adduced of *ſpontaneous parturition*, without a ſingle

* See Medical and Phyſical Journal, No. XVIII. p. 156.

a ſingle inſtance of *perineal laceration*; and, finally, that my wiſh is not, as Mr. S. Thomas gratuitouſly ſuppoſes, to abandon the practice of midwifery to uninformed females; but to vindicate obſtetric philoſophy from the imputation of recommending the *uniform neceſſity* of manual aſſiſtance, and to reſtrict its ſcientific authority for artificial aid to the comparatively rare accidents of unnatural preſentation and other extraordinary occurrences.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

HAVING been informed that in an inoculation of the poor of a pariſh in the neighbourhood of town for the Vaccine Diſeaſe, ſymptoms had occurred very much unlike thoſe we have ever ſeen or heard of in the Cow-pox, and that one of them had actually died under the diſeaſe, we have been induced to viſit them; and we now feel it incumbent on us, as a duty to the public, and in juſtice to Dr. Jenner, to make the following ſtatement, as the reſult of our enquiries.

The poor had been divided into four diſtricts, to be inoculated by four different medical gentlemen reſident in that pariſh. The patients of three of theſe gentlemen had the Cow-pox in the regular manner, without one unfavorable ſymptom.

In the remaining diſtrict it was obſerved, that of fifteen perſons inoculated on the 22d of October, only ſix took the infection.

There is every reaſon to think that this firſt inoculation cauſed no appearances in any degree deviating from the uſual progreſs of the Cow-pox.

The remaining nine were inoculated again on the 31ſt of October.

The gentleman who performed this inoculation candidly acknowledges, that the matter with which he had charged the lancet for this purpoſe had been taken at a very late period of the diſeaſe, after a brown ſcab had formed, and had a purulent appearance at the time it was taken from the arm, conſequently had, by degenerating, loſt the power of giving the Cow-pox infection, and appears to have been the cauſe of all the miſchief that enſued.

It is proper however to remark, that the matter thus taken was not alone truſted to in the dry ſtate, but that, in order to enſure

enſure ſucceſs, freſh Cow-pox *fluid* was alſo taken upon the ſame lancet from the arms of different children before inoculated.

The ſymptoms produced by this inoculation were extenſive eryſipelas, ſpreading rapidly from the part inoculated, accompanied in many inſtances by conſiderable conſtitutional affection, followed in moſt by an immediate ulcerative proceſs, and in ſome even a tendency to gangrene.

In confirmation of the opinion, that an infection was thus propagated, diſtinct from that of the Cow-pox, we are alſo under the neceſſity of ſtating, that in two of the patients who are believed to have had the Cow-pox diſtinctly by the former inoculation, the ſame ſymptoms were unfortunately induced, in attempting to procure Cow-pox *fluid* from them with the ſame lancet.

We have, however, the ſatisfaction of adding, though ſeveral remain indiſpoſed, that all are in a fair way of recovery.

WILLIAM H. WOLLASTON, M. D.
JOHN PEARSON,
JOHN GRIFFITHS,
London, Nov. 20, 1800. RICHARD CROFT.

P. S. For the information of the public, and as a caution to thoſe who may need to be reminded of the injunctions already given by Dr. Jenner, it is thought adviſable to repeat, as conciſely as may be, the directions which may be collected from his various publications on this ſubject.

1. The Cow-pox *fluid* ſhould be taken not later than the ninth day of the diſeaſe.

2. The *fluid* ſhould be perfectly tranſparent, as it is not to be depended upon if it has become in any degree opaque.

3. The *fluid*, if not uſed immediately, ſhould be allowed to dry gradually and thoroughly before it is laid by for future uſe.

4. The punctures can ſcarcely be made too ſuperficial, and on no account ſhould more than one be made in each arm.

5. Attention ſhould be paid to repreſs, as ſoon as may be, any exceſs of inflammation that may happen to ariſe.

*** During a converſation with a profeſſional gentleman of the firſt rank and eminence in the metropolis, on the ſubject of the decompoſition of the Vaccine fluid, I was informed, that many years ago he inoculated a child with Variolous matter ſo very far advanced, that he took it from under a ſcab. It produced a very violent eryſipelatous inflammation on the arm, which gradually extended almoſt over the whole body. The general indiſpoſition thus excited was ſevere, the arm ulcerated, and the diſeaſe terminated in an anaſarcous ſwelling of the left leg and thigh, and laſted ſix months. It yielded at length to ſea-bathing, when the child was again inoculated with

perfect

perfect variolous matter, which produced the small-pox as completely as if the constitution had not felt the influence of the imperfect.

Is the general mass of the human fluids, or those of quadrupeds, capable of undergoing changes spontaneously, which can produce these effects? Or, do they depend upon their degeneracy from matter once possessing specific properties? Wounds of the skin inflicted during dissection, I believe, sometimes produce effects not very dissimilar from those above recited. EDIT.

[*See Dr. Lettsom's Letter on the same subject, p.* 567.]

MONTHLY REPORT of DISEASES,

Admitted under the Care of the PHYSICIANS of the FINSBURY DISPENSARY, St. John's Square, Clerkenwell.

From October 20 to November 20, 1800.

Continued Fever	58	Gastrodynia and Enterodynia	6
Intermittent Fever	1	Menorrhagia	2
Pneumonia	8	Chlorosis and Amenorrhœa	9
Hæmoptysis	2	Hysteria	2
Phthisis Pulmonalis	8	Epilepsy	3
Catarrh	16	Dropsy	5
Cough and Dyspnœa	48	Asthenia	15
Rheumatism	21	Palsy	2
Cynanche Parotidea	1	Cephalæa	6
Erysipelas	1	Gout	1
Peritonitis	2	Aneurismus Aortæ	2
Nephritis	1	Hæmorrhois	3
Diarrhœa	3	Colica Pictonum	1
Dysentery	3	Scorbutus	1
Hypochondriasis	2	Chronic Cutaneous Diseases	9
Dyspepsia	5	Diseases of Infants	16

The autumnal epidemics have retired with the season, and the winter has been ushered in by its usual train of attendant diseases. Those of the lungs, comprized under the terms pneumonia, catarrh, phthisis, cough and dyspnœa, hæmoptysis, &c. have become universal since our last report; and from their importance and the aggravated state of their symptoms, now occupy a principal share of medical attention. These complaints, from the peculiar character of the climate, are remarkably common in this island; and from the circumstances of a large and populous city, prevail among the inhabitants of London in a much greater proportion than among those of the country. The respiration of more than a million of inhabitants, and of the horses and other animals subservient to their use, within so confined a space, constantly exhausts a considerable portion of the vital or oxygenous part of the atmosphere, and imparts to it, at the same time, an almost equal quantity of a gaseous

gaseous fluid, positively deleterious to animal life. The continual burning of fuel, on a prodigious scale, not only contributes to the same effect, but furnishes an immense mass of smoke and sooty particles, enveloping the city and its environs to a considerable extent. The air is rendered further impure by the effluvia from common sewers, and repositaries of filth and excremental matters; from stables, slaughter-houses, many sorts of offensive manufactories, the refuse of markets, provision-shops, &c. A quantity of dust is likewise put in motion, and diffused abroad, by the continual stirring of the inhabitants, and by the operations of trade, and of domestic cleanliness. The air thus deprived, in some degree, of its salutary property, and impregnated with noxious substances both chemical and mechanical, is generally, at this period of the year, loaded also with a thick and sluggish fog. When the agent immediately subservient to the function of respiration is so contaminated, it is not wonderful that the function itself should, in consequence, be impeded and deranged. Hence an habitual cough is remarkably frequent among the inhabitants of London, laying a foundation in some for the phthisis pulmonalis, and degenerating in others to a constant state of dyspnœa, with increased secretion from the bronchial vessels. This morbid condition of the lungs becomes aggravated throughout the winter season; and on the special application of cold, or other exciting causes, is, according to the age, constitution, &c. of the patient, often converted into one or other of the species of pneumonia, but principally into that which has been denominated peripneumonia notha. For the same reason also, acute pulmonary diseases are much retarded in their cure, or are protracted to a chronic state.

The continued fever steadily preserves its dominion, and with nearly the same character as during the two preceding months; lately, indeed, it has in several persons been accompanied with an inflammation and slight ulceration of the throat. This circumstance was observed in the fever of the last year, about the same period. It is usually connected with the prevalence of idiopathic anginas; but of these there has lately occurred no instance within our notice, if we except the case of cynanche parotidea.

Although the origin of fever among the poor, may, in general, be easily and distinctly traced, yet on some occasions its source is by no means obvious. Three children from the age of 6 to 12 years, belonging to a mechanic whose apartments were remarkably clean, and in an airy situation, were attacked in the afternoon of the *same* day by the cold paroxysm of fever, which was soon succeeded by a permanent state of heat, quickness of pulse, and other usual symptoms. In two, the disease terminated favourably in little more than a week; but in the third, it ended fatally about the twenty-first day. The parents being minutely questioned as to the circumstances to which these patients had been exposed previously to the attack of fever, were perfectly sure that they had not been near any person ill of the disease; but mentioned that they sometimes used to play and wander in a neighbouring church-yard, (St. Luke's)

houſe; he was a youth of 11 years old, a native of Moſcow, and had been born with the left foot diſtorted; every thing that the ſtate of ſcience, in his own country, could ſuggeſt, had been tried in vain; he then came to London, and was confided to the care of Mr. Pugh, who deſired a conſultation with Meſſrs. Cruikſhank and Wilſon; Mr. Pugh propoſed to have the tibial muſcles and aponeuroſis plantaris, or ſuch parts of them *as he thought* were contracted, divided; after which, he ſaid, *he imagined* he could compleat the cure; this was objected to by the two gentlemen, and Mr. Wilſon adviſed that I ſhould be conſulted.

Dr. Grieve, Mr. Pugh, and the patient's uncle, were preſent when I examined the foot. I had reaſon to believe it was a caſe that I could cure; but I felt it would be indelicate to propoſe, that the patient ſhould be taken from Mr. Pugh and confided to me, I therefore only ſaid, I thought he might be much benefited by what I could do for him; and it was agreed that I ſhould do what I thought right, Mr. Pugh at the ſame time continuing to treat him in his way. But, in a private conference with Mr. Pugh, after the patient and his friends had retired, I deſired to know *his opinion* of the caſe? He thought the patient might be benefited, but had no conception that a cure was poſſible; I declared, unequivocally, my conviction that he might *be perfectly cured*; but, I added, it muſt be by means only known to myſelf, and by my own application; that I had not mentioned this, from motives of delicacy, before the patient and his friends, but thought it right to inform him, I ſhould do nothing unleſs the patient was left entirely to my management; and if this was not agreeable to him, I ſhould decline interfering, and conſider myſelf as withdrawn from the caſe.

Mr. P. was delighted to hear that I thought a cure was not impracticable, and laboured ardently to perſuade me to *inform him* of the method I ſhould uſe, and put *him* in poſſeſſion of my inſtruments; but finding me inflexible, he, with *the affectation of much liberality*, *declared* he only ſought for the patient's benefit, and therefore conſented that I ſhould proceed in my own way.

But ere I was prepared to begin, the uncle called upon me; he apologized for the diſagreeable ſtep he was going to take, but added, that Pugh had deſired him to prevent *me* from doing any thing, as ſome ideas had occurred to *him*, which he hoped would be beneficial to the patient, and he accordingly did ſatisfy me for my trouble, and the caſe was again left to Mr. Pugh.

In the beginning of February, however, the ſame gentleman applied to me again; I learned, that during the time that elapſed

elapſed ſince I laſt ſaw him, Mr. Pugh had only repeated his former practice, but he had introduced ſome workman who made an inſtrument that could not be applied, he therefore was now determined to truſt the caſe entirely to my management.

At this time I had a caſt in plaſter of Paris made from the foot; this caſt remains in my poſſeſſion, and will demonſtrate that the facts were as follow:

The foot was perfectly rigid, and he was incapable of moving it voluntarily in any direction; though, when he ſtood upon it, the little toe only touched the ground, and then the ancle joint bent a little under him, yielding to the weight of the body, and, in conſequence of this action, becoming gradually more deformed: the head of the aſtragalus projected much before the tibia, the tarſal bones formed an acute angle with reſpect to the tibia, and bent inwards: the metatarſal bones likewiſe formed an acute angle with reſpect to the bones of the tarſus; there was no voluntary motion in the toes, and the tibial muſcles and plantaris aponeuroſis *ſeemed* to be permanently contracted. The knee, in conſequence of the imperfect action of the foot, had bent conſiderably inwards.

He continued under my care till June 19, in the ſame year, when it was neceſſary that he ſhould return to Ruſſia; at this time I had a ſecond caſt taken from the foot, which, as well as the former, remains in my poſſeſſion, and will demonſtrate the following facts, viz.

He ſtood perfectly flat on his foot, inſtead of bearing only on the little toe, the top of the foot forming a right angle with the leg as much as any other foot does: the head of the aſtragalus had regained its natural poſition under the ſcaphoid cavity of the tibia; the bones of the tarſus had regained their natural poſition relative to the leg, and the metatarſal bones had almoſt got into their natural poſition: the conſequence of all this was, that the foot had acquired a form nearly reſembling the natural foot, and actually meaſured ſeven-eights of an inch *more in length than it did when I firſt ſaw it, four months before this period.* The plantaris aponeuroſis and tibial muſcles had loſt their apparent rigidity, and, as well as the tendo achillis, or rather the gaſtrocnemii muſcles, which move it, had acquired the power of acting in the natural way; the peronei muſcles, as well as thoſe which move the toes, had acquired their natural action, and he was, in conſequence, enabled to move the foot in every direction, and in perfect obedience to the will.

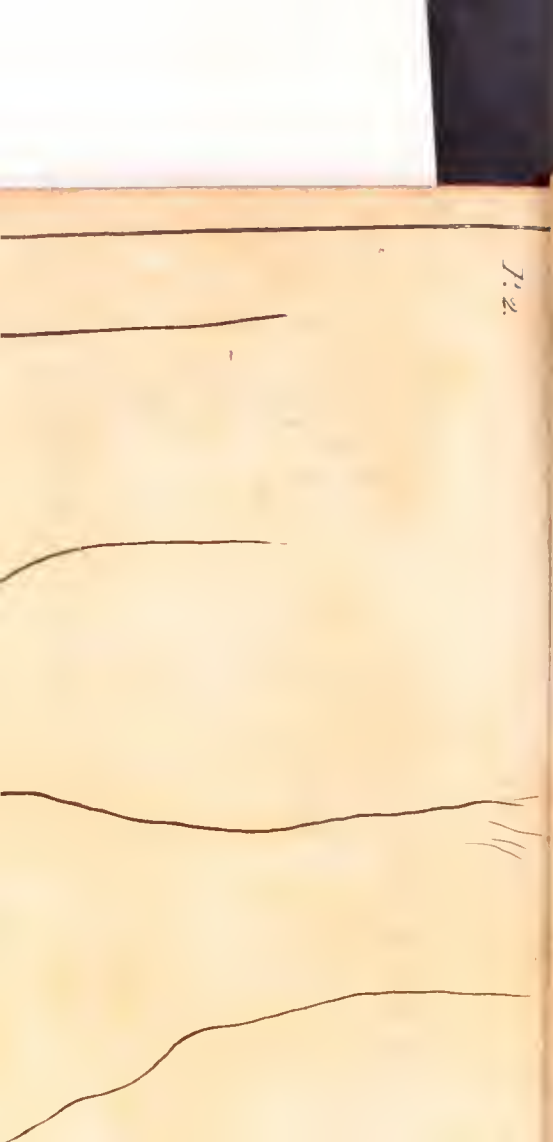
So much having been done in this caſe, there was every reaſon to believe the cure would have been perfect in every ſenſe, had he continued longer under my care; but it was in-

diſpenſibly neceſſary that he ſhould return to Ruſſia; and it was hoped that what little was ſtill wanting to compleat the cure, might be affected by means of the inſtruments with which I ſupplied him. His tutor, an intelligent man, who paid particular attention to the inſtructions I gave him, undertook the charge; I have ſince enquired of Mr. N. the patient's uncle, who is ſtill in London, and from him have received the following letter.

MONSIEUR, *Oct^re.* 15, 1800.

Ayant lû la deſcription que vous avez fait de l'etat dans laquel le pied de mon neveu ſe trouvoit avant qu'il fut remis entre vos mains et de la difference tres marquée, que le ſuccés des ſoins et des moyens que vous avez employés y avoit déja porté; lorſqu'a mon grand regret, forcé par quelques circonſtances particulieres, je me vis obligé de le renvoyer dans ſa patrie, et de faire ceſer, ainſi, ſon traitement. Je croirois, Monſieur, totallement manquer aux ſentimens de juſtice, et a ceux de la reconnoiſſance pour le bien que vos ſoins ont rendus a un jeune homme qui m'intereſſe, ſi je ne ſaiſiſſois pas, avec empreſſement l'occaſion que vous m'offrez de ſatisfaire au deſir que j'ai toujours eu, de rendre a vos talents un temoignage auſſi public que poſſible; guidé par ce ſentiment, ainſi que par l'amour de la juſtice, je declare que tout ce que j'ai lû dans la memoire que vous m'avez fait l'honneur de me communiquer, porte, en general, et ſur tous ſes points, le caractere de la plus ſtricte verité; et que, de mon coté je n'ai pas le moindre doute que s'il eut été poſſible de le laiſſer plus long tems entre vos mains, ſa jambe rentreroit entierement dans ſon etat naturel. En effet, Monſieur, je crois que l'evidence des faits m'autoriſe de le ſuppoſer: car, loſqu' aprés m'avoir ſeparé de lui pour quelques mois, je le revis à Hambourg, par ou il paſſoit pour rentrer dans ſon pais, je ne fus pas peu ſurpris de le voir poſer ſa jambe ſur la plante du pied, et d'une maniere qu'il ne reſteroit rien a deſirer une fois que le vice du genou, ſucceſſivement produit par le poids du corps, qui, dans ſon etat, devoit neceſſairement porter a faux, ſeroit enlevé: et, en examinant la derniere machine que vous fites pour lui et dont il devoit continuer a s'en ſervir, j'ai crû avoir toute les raiſons poſſibles de former les plus flateuſes eſperances que ce dernier moyen remedieroit à ce mal, avec le meme ſuccés qu'ont eu les premiers. Je ſuis faché, pourtant, que malgré toutes mes inſtances pour avoir quelques details ſur la ſuite des effets qu' a produit l'application de cette derniere machine, je ne puis obtenir d'autres reponſes, que celles, ou l'on me diſoit vaguement, que ſa jambe alloit beaucoup mieux. Je le repête

P. 1.



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repête encore que, pour ma propre ſatisfaction ainſi que pour la votre, j'aurois bien deſiré pouvoir etre en etat de vous en rendre un compte plus circonſtantiè; mais, en attendant que je ſois a meme de le faire, je ne ſuis cependant pas peu flaté de pouvoir vous rendre toute la juſtice qui eſt en mon pouvoir, comme un tribût de la reconnoiſſance avec laquelle j'ai l'honneur d'etre,

MONSIEUR,

No. 71, Warren Street, Fitzroy Square.

Votre trés devoué,
N. de NOVASSILZOFF.

It will, perhaps, not be unreaſonable to conclude, that ere this the patient is *perfectly* well; but as I wiſh to avoid every thing that may afford the leaſt pretence for doubt or contradiction, I ſhall confine myſelf to ſuch facts as are capable of being ſatisfactorily demonſtrated.

I have ſaid I cauſed one caſt to be made from the foot before any thing was done, and another at the time I took my leave of the patient; theſe caſts are in my poſſeſſion, and I have made three drawings from each of them, placing them as nearly as poſſible in correſponding ſituations; theſe views are annexed, and will convey an accurate idea of the ſtate of the foot at the periods when it was within the ſphere of my obſervation. Mr. N's letter deſcribes what was his ſituation ſome months after he left me; and from the combined effect of this evidence, the reader will form his own concluſions.

In making my drawings of the original diſeaſe, I have placed the leg quite upright, and the foot falls into the ſituation it was in when he ſtood upon it: There are three views of the foot in this ſtate; No. 1, looking directly upon the inſide of the leg; No. 2, upon the outſide of the ſame; and No. 3, a front view of the leg. The appearance of the foot in each of theſe views, will, I think, ſhow very intelligibly the actual ſtate of the diſtortion.

In drawing the foot after it was cured, I have purſued the ſame plan; that is, there are three views; in making which, I placed the leg in exactly the ſame ſituation as I did the former; by comparing them, the improved ſtate of the foot will, I think, be clearly underſtood.

In No. 1, being the inſide of the foot, there appears not the leaſt deformity; in No. 2, the appearance is not ſo perfect; and in No. 3, there is the additional diſadvantage of ſhowing a fore ſhortened view of the foot: but theſe ſhow all the deformity then remaining, viz. that thoſe bones which form what is commonly called the inſtep, are ſomething higher than uſual.

At the time this patient was entrusted to my care, I had treated none who were by many years so far advanced in life. The circumstance which then seemed to me remarkable, as it distinguished this from every case that had been under my care, was the following: In young subjects, the reduction of the feet to their natural form is effected long before the power of using them is acquired; but in this case, those two effects were produced at the same time; whence we are justified in concluding, that if those trifling peculiarities which remained when he was taken from under my care, were not afterwards removed, notwithstanding those imperfections, his foot is in every respect as useful as the other; but if we are to assume, as most probably is the fact, that they have since disappeared, the cure is in every respect compleat.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN a late Number of your valuable Journal, I observe that a Mr. Sheldrake has given what he denominates an answer to my Communication on distorted limbs. Regard for the interests of truth undoubtedly induced you to publish his answer; and respect to justice will induce you, I hope, to admit my reply.

The general common-place observations in the first part of the answer are, in my opinion, an odd mixture of affected candor and of intentional severity. As they, however, affect not the merits of my communication, but, like many introductions, may with safety be attached to any other publication, I shall proceed to consider that part of the answer which calls the originality of the invention in question. For this, three reasons, beside his own claim, which is afterwards *modestly* advanced, are proposed.

1. Mr. S. says, he has some *reasons* to conclude that the invention is not very dissimilar from the *Edinburgh boots*, which, by the bye, he does not pretend to have seen, but only received, by second hand, a description of them which came from a Dr. Dease, with whom he had no communication on the subject. The want of *candor* in this first reason is certainly inconsistent with that *display* of it so frequently made by Mr. S. And if he who has made the subject of distorted limbs so much his study, has not met with these boots, it cannot be surprising that they never came in the way of a practitioner in the *country*?—

What

What these *well-known* Edinburgh boots were I have not been able to learn, nor can I form any idea of them from the account Mr. S. has given, further than that they *press* and *compress* the legs; and from this *candid*, but certainly *superficial* mode of reasoning, he concludes that it is impossible they can be very *dissimilar* to the one in question.

2. The circumstance of Dr. Aitkin's instrument resembling mine in *part*, is adduced as the second reason; and I may be allowed to obviate this objection by observing that the Doctor's instrument was not to my purpose, and has not answered the purpose of surgeons in general. In the first of the two cases I have communicated to the public, before the application of my machine, and before I saw the case, Dr. Aitkin's invention, as well as many others, had been repeatedly tried, but without success. With regard to the similarity between the two contrivances I shall say nothing; the Doctor's Essays on Fractures, &c. are well known, and every one has it in his power to compare and judge accordingly.

3. It may appear a waste of time to refute his third reason, since Mr. S. admits that the invention of Mr. Holmes, the shoe-maker, only *imperfectly* cured some very *slight cases*, but was never able *to cure any one important case of distortion.* Why then, since his invention is of so little consequence, is it brought into view? I should certainly have suspected, had Mr. S. been writing another *Practical Essay* on distorted limbs, that he had foisted in the *shoe-maker* with little other motive than merely to *swell* the size of his volume.

Thus it appears that the *reasons* Mr. S. proposes against the originality of the invention are nothing more than *bare assertions.* The first is founded upon *report.* The second, even according to his own account, which, by the bye, is carried to the extreme, only *resembles it*; nay still less, only *resembles it in part.* And the third, where the *shoe-maker* is brought into view, is still more trifling; for, granting that there is such a man as Mr. Holmes, the shoe-maker, and that he has invented something for curing distorted limbs, it appears, to use the words of Mr. S. that his invention was totally useless, having never cured any one important case of distortion. What their *long* experience proves I cannot tell; but I beg leave to say, that my *short* experience has witnessed the cure of *more than one* important case of distortion. Indeed, with regard to the labours of Mr. Holmes, the *shoe-maker*, and with him I may associate Mr. Sheldrake, the *truss-maker*, it would be *uncandid*, nay *unjust*, to say any thing, having never seen, much less tried, the invention either of the one or the other.

Having

Having ſaid *thus much* of the *originality* of the invention, Mr. S. introduces his remarks on its *efficacy* with a few more common-place obſervations, which, as they appear to be little to the point, I ſhall paſs over, and proceed to conſider his *aſſertions* with regard to its *inutility*.—He cannot conceive how any man, and particularly one at ſuch a *diſtance* from the metropolis, could have the *temerity* and *confidence* to thruſt down people's throats ſuch *crude* and indigeſtible notions; notions which have no other foundation in practice than two caſes, and which Mr. S. in his uſual *hypothetical* ſtile, aſſures his readers were only *very ſlight ones*.—If it is proceeding upon ſlight and ſuperficial ground, to venture to recommend a method of cure which has been completely ſucceſsful in two caſes, it is certainly ſtill more ſo to condemn that method, without giving it a trial at all. This is certainly not like the actions of a man of *candor*, who proceeds by *reiterated experiments*, and whoſe opinions and aſſertions are founded alone on the evidence of facts. Yet ſuch is the conduct of this hero, who has ſo humanely and *diſintereſtedly* volunteered his ſervices to protect the healing art from ſuch *crudities* and groſs innovations.

There is one thing in Mr. S's anſwer, which the moſt ſuperficial reader muſt have obſerved with aſtoniſhment, that is, the wonderful verſatility of his genius in accommodating itſelf, with ſo much facility, to all the endleſs varieties of this claſs of diſeaſes. He aſſures us, that of more than an hundred caſes which he has cured perfectly, no two were alike, or could have been cured without adopting the mode of treatment peculiar to each. Nay, what is ſtill more aſtoniſhing, there is not only this endleſs variety in the caſes themſelves, but *there is, in every caſe, one condition of the bones that will require peculiar treatment, there is another condition of the ligaments, and a third of the muſcles*. To believe the firſt of theſe aſſertions, that no two caſes are *exactly* alike, requires no uncommon ſtretch of credulity; and the laſt, although it may excite the ſmile of the anatomiſt, certainly adds little to our knowledge of the *facts* of the diſeaſe.

Mr. S. has ſaid much about *crude* ideas, and *crude* notions, of the *facts* of this diſeaſe. I ſhould be glad to know in what particular he has rendered our ideas of the *facts* of the diſeaſe more preciſe, ſimple, or intelligible than they were; and where he has ſubſtituted better terms than thoſe of VARUS and VALGUS, which have been ſo univerſally uſed. I am of the ſame opinion with him, that terms ſhould be as appropriate as poſſible, and that *varus* and *valgus*, if not ſufficiently deſcriptive, be rendered explicit by definition, or give way to terms better

adapted

adapted to determine the nature of the diſeaſe. But I cannot ſurely incur any blame for employing the old terms, which Mr. S. with all the extenſive information to which he lays claim, has not ventured to expunge. If my ideas of the facts of the diſeaſe *ſeem* to be *crude*, my practice has been *really* ſucceſsful; and Mr. S's *mite*, I am aſſured, has not added much to the intelligence of any of my medical friends who have read his anſwer. Indeed, the only thing that can be gathered from the whole of Mr. S's anſwer, is a conſtant wiſh to magnify the difficulties of applying the machine, and effecting a cure, and might, perhaps, have been expreſſed in a few words, by ſimply telling us, *that none could do any thing to it but himſelf.*

Theſe aſſertions, the reſult of Mr. Sheldrake's many years practice, ſet this claſs of diſeaſes in a light they had never been placed in by any perſon whatever, and he has thus diſcovered and perfected a method of cure much more effectual than any that had previouſly been known! To ſay nothing of the *modeſty* of this claim, I ſhall only obſerve, that if there be one condition of the bones, another of the ligaments, and a third of the muſcles, that require treatment peculiarly adapted to each; and if no two caſes in more than an hundred be alike, or could have been cured by the ſame means, the public can derive little or no advantage from the publicity of his patent, or the application of his machine, which, in this caſe, would require a verſatility of genius to adapt it, equal, if not ſuperior, to that of its *Original Inventor.*

In oppoſition to this eccentric mode of reaſoning, I can aſſure Mr. S. that I have now cured two caſes completely, and at this moment I have proceeded a conſiderable length with ſome more; that all of them were, in ſome reſpects different; but all are likely to be cured by the ſame means. And if I may now believe the teſtimony of my ſenſes, as well as the opinion of ſome eminent medical gentlemen, I may ſay, and with more confidence than ever, "that there is no caſe of diſtorted limbs, however formidable they may appear, *if taken in time*, but may be cured by the ſame means." I ſay, *if taken in time*, for my experience does not authoriſe me to ſay, that one above a year and a half old can be cured of the diſeaſe.

In a ſubſequent part of the anſwer, I was ſomewhat ſurpriſed to find, a reſemblance mentioned between my invention and that of Mr. S. He is very careful to expoſe the inefficacy of mine; and this affords a clue by which we can ſee through the ambiguity of his expreſſions, and arrive at the motive of his attack. But prudence ſhould have dictated another line of conduct, ſince, by cenſuring one whom he conſiders a rival, he expoſes himſelf to ſimilar condemnation. What

he adduces againſt the inefficacy of my invention, if the reſemblance be ſtriking, muſt be equally applicable to his. I am far from thinking that either are ſo ineffectual as Mr. S. would inſinuate: I have informed the public of the effect produced by the inſtrument which I contrived; and as I have not had an opportunity of applying Mr. Sheldrake's, I cannot in juſtice give any opinion upon its merits. I did not expect that a man of *candor* would have commenced an attack upon any invention till he had made trial of its merits, and by the *ſure teſt* of EXPERIMENT been enabled to decide with *accuracy*. The *crudeneſs* of this manner of cenſuring, is obvious without a comment; and though, from my ſhort ſtanding in the profeſſion, I cannot lay claim to Mr. Sheldrake's OMNISCIENCE in caſes of diſtortion, I affirm, that his anſwer has done very little to render our knowledge of the *facts* of the diſeaſe more complete than they were before.

I may obſerve too, that if my inſtrument nearly reſembles Mr. Sheldrake's, it is equally efficacious; if more imperfect, it need not have given him alarm; and if an improvement on his conſtruction, as a friend to humanity, he ſhould have rejoiced in what was likely to benefit mankind. Had Mr. S. been convinced in his own mind that he could ſubſtantiate his charge of my invention being the ſame, or ſimilar to his, he had no occaſion to employ this method of procuring redreſs. No, have recourſe to his *patent*, which, he ſays, he obtained to ſecure the benefit of his diſcovery to *himſelf*. Let him have recourſe to the laws of his nation, and ſeek redreſs in its proper channel, and not with his native effrontery *criminate* thoſe by BARE ASSERTIONS whom he cannot *condemn* by SOUND ARGUMENT.

The *candid manner* in which my Communication has been treated, lays me under under ſtrong obligations to ſpecify the particulars moſt deſerving of my gratitude. I conſidered it as neceſſary to mention the minuteſt circumſtances attending the cure; and when humanity and caution dictated the preſcription of a mild opiate, I did not expect that for this I would have received animadverſions from any perſon who had the moſt diſtant pretenſions to medical ſkill. If Mr. S. has cured more than a hundred important caſes of diſtortion without adminiſtering any medicine to alleviate the pain neceſſarily attendant on the progreſs of the cure, he has been fortunate indeed, or is poſſeſſed of feelings not very tenderly alive to infantine ſuffering. In the firſt caſe I found it neceſſary; in the ſecond, although the caſe was conſiderably worſe, I did not: In one of them I have under my care at preſent, I uſe it occaſionally; in the reſt, I find it abſolutely unneceſſary.

An

An error, either typographical or in the MS. tranſmitted, has met with cenſure. The ſlighteſt reflection might have diſcovered, that the ſecond NOT in line 8, page 94, was inadvertently inſerted; and on this account it was certainly below any man, much more a man of *candor*, to have taken the advantage of it.

I take leave of this ſubject, requeſting that my readers will pardon any appearance of *egotism* that may appear in this reply, ſince it is not eaſy to talk of oneſelf without giving offence. I am,

GENTLEMEN,

Your much obliged ſervant,

Paiſley, Oct. 21, 1800. R. WATT.

*** In a private letter from Mr. Watt, he ſays, "In conſequence of my former communication, I have had many applications of late from different parts of the kingdom, and have at preſent under my care a great many caſes of diſtortion. I have, ſince my laſt communication, invented another machine, which I apply when there is only one foot diſtorted, and when the patient is ſo old as to be able to walk. This machine retains the limb in a proper poſition, while at the ſame time the patient can walk about with tolerable eaſe. By making a little alteration, I have alſo applied it with great advantage to debility of the knee and ankle joint, and for removing ſtiffneſſes of the knee-joint, occaſioned by contraction of the muſcles and tendons on the poſterior ſide of the limb: An account of this will probably form the ſubject of a future communication. I believe, in a former letter I informed you, that I had invented a machine for curing diſtortions of the ſpine, ſhoulders, and neck; upwards of twenty of which have now been made, and applied with great advantage.

"In a letter a few days ago, which I had from Mr. Moyes, of Edinburgh, he informs me, that he has lately had orders from York for two of the inſtruments for Lithotomy, (publiſhed in No. XIII. of your Journal) one to Aberdeen, and two to two medical gentlemen in Edinburgh. I have myſelf, within theſe three months, had orders for one to Mancheſter, one to Liverpool, one to Glaſgow, and one to Philadelphia. From which demands, I flatter myſelf, that ſome time or other it may come into general uſe.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

THE reſult of the following caſe I hope will not be deemed unworthy your attention, and a place in your valuable Journal; deſirous of ſhowing the junior practitioner the propriety of his attempting to afford relief even in thoſe caſes where the endea-

vours of the more experienced in the profeſſion have been defeated. I am,

GENTLEMEN,

Your's, very reſpectfully,

St. Thomas's Hoſpital, Oct. 16, 1800.

J. COWLEY.

James Flocker, aged 29, of low ſtature, but of robuſt make, was admitted into St. Thomas's Hoſpital on Sept. 25, 1800, with a luxation of the jaw. Said, on the 27th of Auguſt laſt, he retired to bed at his uſual hour, in health; but at three o'clock the next morning, he awoke with a violent pain in the face, attended with much ſtiffneſs, and the mouth in an open, fixed ſtate. The ſame day he applied to two ſurgeons for advice, who both agreeing that it was a luxation of the jaw, attempted its reduction repeatedly, without ſucceſs: the patient remained under their care three weeks; but receiving no relief, he left the country for town, and on the above day applied at St. Thomas's Hoſpital, with an evident luxation of the jaw; yet, in other reſpects, apparently in health. His appetite good; pulſe full and regular; the muſcles of the face in a ſtate of rigidity; and his mouth ſore from the treatment he had received; ſo that the introduction of the finger was attended with much pain. Under theſe circumſtances, I conſidered much depended on my firſt attempt; and Mr. Birch (the ſurgeon under whoſe care he was admitted) having adviſed me to effect as complete a relaxation of the parts as poſſible, before any means were uſed for its replacement, I applied five leeches on each ſide of the face, in the direction of the maſſeter and temporal muſcles, which having dropped off, the after hæmorrhage was much increaſed by placing the patient in the warm bath at 98°, which was gradually increaſed to 106 degrees of heat of Farenheit's thermometer. After the patient had been in twenty minutes, his pulſe ſunk, became irregular, and ſhewed ſymptoms of ſyncope; at this juncture (the patient remaining in the bath) I attempted to preſs on the jaw with my thumbs covered, but finding it impoſſible to act with advantage in this manner, I removed the incumbrance, and introduced them unarmed and preſſing on the jaw as far back as poſſible, beginning with a ſlight preſſure, ſlowly adding the force requiſite, I continued the extenſion downward, with a ſlight inclination forward, for ten minutes; at this time I tried to force back the jaw, and evidently perceived it to be altered in its ſituation; but on its producing ſome pain, the patient forced himſelf from my hands, and the foſſæ receiving the condyles of the jaw, being in a great meaſure filled up with an extravaſated ſubſtance, (this I conſider

conſider to be the fact, from the jaw not ſlipping into its place ſuddenly, as is generally expected in theſe accidents) it reſumed its wrong ſituation with the greateſt facility: At this time his pulſe began to encreaſe, both in ſize and fulneſs; I therefore immediately renewed my extenſion as before, and having continued it for ten minutes, again preſſed backward, and had the ſatisfaction to ſee it properly reduced. The parts were now ſecured by a bandage, and the patient retired to bed. 26th. He complains of pain in the direction of the temporal muſcles, his pulſe weak, ſoft, and ſlow; the ſymptoms of irritation are not however ſo great as expected, ſo that a confinement to bed is unneceſſary; he took an aperient draught this afternoon. 27th. His pulſe is increaſed in ſtrength and fulneſs; the draught procured him three motions, which gave great relief; from this time he may be conſidered as in perfect health, capable of maſticating ſolid food, and in every other reſpect as well as before the accident. October 9, he was preſented out of the Hoſpital, cured.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

CASES are, I believe, no longer requiſite to prove the efficacy of the Cow-pox in preventing the Small-pox; and hence it is probable, the circumſtances hereafter to be ſtated may not be worthy of your inſertion: I ſhall however communicate the facts, leaving you to decide on the propriety of making them public.

On the 6th of September, I inſerted the vaccine lymph, which had been ſuffered to dry on the lancets, into the arms of an healthy child, about eight months old, who had been inoculated for the ſame diſeaſe a few months previous, by another practitioner, without ſucceſs; this inſertion alſo failed, and I repeated the inoculation on the eighth day, immediately from the arm of another infant. The uſual appearances taking place in each arm, the patient went regularly through the diſeaſe. Now, there was a ſiſter ſome months older, the inoculation of whom, the parents were deſirous to defer till lymph might be obtained from the brother; but on the ſixth day from the ſucceſsful inoculation of the latter, the former had a plentiful eruption, which proved to be variolous. The diſeaſe of each

proceeded

proceeded regularly, and I frequently saw the children laying alternately in one cradle.

On the tenth day of the vaccine disease, I had the child who had been thus exposed to the variolous contagion, brought to my house, and from him inoculated three other children, who also have gone regularly through the disease.

The former patient continuing in good health, and not having to this time received the variolous contagion, adds one very strong case to the many already made known, to prove the preventive effects of Vaccine Inoculation. I am,

GENTLEMEN,

Green Street, Grosvenor Square,
October 8, 1800.

Your humble servant,
THO. SERGEANT.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IF the inclosed medical histories and reflections correspond with the plan of your Journal, the disposal of them is very much at your service. I am,

GENTLEMEN,

Wakefield,
October 18, 1800.

Your humble servant,
CALEB CROWTHER, M. D.

Case of Induration of the Vesiculæ Seminales, Prostate Glands, and Rectum.

I first saw Mr. A. B. a married man, aged about fifty, on the 19th of August, 1798. He was then affected with frequent motions to make water, accompanied with exquisitely painful emissions of semen every time he made water; he complained also of frequent pain in the glans penis. His bowels were regular, he had no thirst, his pulse was about 80 in a minute, his appetite not much impaired; in short, he followed his usual occupation, and the only inconvenience he suffered was from the debility and emaciation induced by the painful emissions. The surgeon who had previously attended him, Mr. Taylor of this place, informed me that about the middle of February last, he began to be affected with strangury, which continued with occasional intervals of ease, until the latter end of April, when he was attacked with swelled testicle, accompanied with considerable

conſiderable pyrexia. On the diſappearance of this affection, came on the painful and involuntary emiſſion of ſemen after voiding urine. After this ſymptom had continued ſome time, the ſemen emitted was nothing more than a light froth, followed by a diſcharge of air from the urethra.

From this period, the 19th of Auguſt, I ſaw him no more until the 25th of December, four days before his death. I was informed by Mr. T. that he continued in much the ſame ſtate as when I laſt ſaw him, until about the middle of November, when the emiſſion of ſemen ceaſed. On the 1ſt of December, he began to have much more pain than uſual about the neck of the bladder, his ſtrength ſunk faſt, his general appearance altered very much, and in the courſe of a few days afterwards he began to diſcharge purulent matter from the urethra, which continued until his death.

Appearances on Dissection.

On inſpecting the cavity of the pelvis, the bladder appeared thickened, and adhered firmly to the rectum and adjacent parts. The upper part of the rectum was thickened and indurated, or, as it is commonly termed, ſchirrous. The veſiculæ ſeminales were about the ſize of a moderate nutmeg; when cut into, there appeared no regular cavity, but extravaſated blood ſeemed to be interſperſed through their whole ſubſtance.

Both the proſtate glands were much enlarged and indurated, and the left gland in a ſtate of ſuppuration. The urethra was ſound throughout the whole courſe, but conſiderably contracted near the neck of the bladder. The internal ſurface of the bladder was not ulcerated nor diſeaſed. The teſticles were both ſound, but very ſmall. The epididymis of one of the teſticles appeared to be waſted away, in the other teſticle it was very ſmall.

The only remedy which I ordered for him was cicuta and opium, in the form of pills, which he took but for a very ſhort time. He afterwards took cicuta and calomel; and a neighbouring phyſician, who conſidered the caſe to be an ulceration of the bladder, ordered for him uva urſi, mucilaginous medicines, and anodyne injections. The only thing which afforded him relief was opium. In the early ſtage of the diſeaſe he took various other medicines appropriated to the exiſting ſymptoms of the complaint.

He confeſſed that he had been much addicted to Onaniſm in his youth, and warned his young relatives a few days before his death of the pernicioufneſs of the practice, to which he aſcribed his preſent complaints. It is not improbable, I think, that his ſurmiſe with reſpect to the cauſe of his diſeaſe was well

well founded. On examination per anum in Auguſt, I could not diſcover any enlargement in the proſtate glands. The diminution in the ſize of the teſticles was effected by a continuation of the diſeaſe; there was nothing unnatural in their appearance when I firſt ſaw him. The diſeaſed part of the rectum was not contracted; but if not kept open in his bowels, he had frequent teneſmus.

Suppoſing that a caſe preciſely ſimilar to this were to recur, and that the medical attendant ſhould be thoroughly acquainted with the parts diſeaſed, the proſpect of a cure from the exhibition of medicines would not, I fear, be very favourable.

Case of Mania.

John Lauton, aged about 26 years, on the 11th of April, 1800, became deranged. For a fortnight before this period he had been much dejected, and, being under the influence of religious fear, had devoted the greateſt part of his time to ſerious reading. He had previouſly been in the habit of frequent intoxication, and his mother had been deranged at intervals for the laſt twenty years. His pulſe and other functions, when I firſt ſaw him, were natural; but he had been at times, for a few hours, very ungovernable. Religion was the topic on which he raved. I ordered a ſtrait waiſtcoat to be made uſe of, and preſcribed a ſolution of Antim. Tartarizat. which operated pretty well, when he had taken 8 grains. After the operation of the emetic, I directed him to take a few grains of camphor every four hours. On the 13th and 14th there appeared very little alteration in the ſymptoms. His pulſe was about 80 in a minute, and of natural ſtrength. Being coſtive he had each day an enema adminiſtered, but refuſed to take any more medicines.

I deſigned to put him under the influence of digitalis, but his attendants were unable to compel him to take it. I was ſurpriſed to hear, on the 15th, of his death, which took place on the preceding evening. As I ſaw no ſymptoms indicating danger during my laſt viſit, I requeſted leave to examine the body. On the 14th, in the morning, having become leſs untractable, his attendants had removed the ſtrait waiſtcoat. When I viſited him, about ten o'clock in the morning, I requeſted his attendants again to apply the ſtrait waiſtcoat immediately; but this direction not being complied with, in the courſe of an hour he became ſo unruly that ſix men were unable to put on the ſtrait waiſtcoat; on this account they bound him in bed with cords. The efforts which he made to diſentangle

tangle himſelf, occaſioned thoſe parts of the body that came in contact with the cords, particularly about the thorax and thighs, to be much diſcoloured.

Appearances on Dissection.

On opening the head I found that the inveſting membranes of the brain had no diſeaſed appearance, nor, indeed, did I obſerve any unnatural appearance in the ſubſtance of the brain itſelf, until I divided a ſmall portion lying immediately over the ſella turcica; when I diſcovered a quantity of florid blood mixed with air, in the form of froth, proceeding from a ruptured artery, a very ſmall branch originating from the arterial circle of Willis. This extravaſation, which did not exceed two or three drachms, ſeems to have been the immediate cauſe of this man's death. Perhaps in this caſe, the preſſure of the air which had eſcaped from the artery, had been more injurious than the blood. The extravaſation of two or three drachms of blood ſeems to be but a trifling cauſe to produce ſo great an effect. The body was opened about twenty-four hours after the patient's death. The ſubſtance of the brain, in this caſe, was not harder than uſual, that appearance being probably the effect of long-continued diſeaſe. On examining the thorax, a rib was found fractured by the cords; but the contents of the thorax were not diſeaſed. The heart ſeemed to be ſomewhat ſmaller than uſual.

Thoſe alone who have practiſed medicine will be able to form a juſt idea of the difficulties which phyſicians have to encounter, in combating the prejudices and affections of the ſick and their attendants. The antipathy which the lower claſs of people have to the uſe of the ſtrait waiſtcoat is ſuch, that often no reaſoning, no entreaty, can prevail upon them to employ it, until, perhaps, the life of the patient, or his attendants, has been endangered; and even then, as ſoon as ever a lucid interval appears, the waiſtcoat is thrown off, being conſidered as a badge of inſufferable diſgrace. This is the ſecond inſtance of mania occurring in my practice within the laſt eight months, which terminated fatally, apparently by binding the patient with cords. On this account, it is much preferable to ſend maniacal patients to houſes of reception for this unfortunate claſs of people, than to leave them to the management of relatives and friends.

Far the greater proportion of caſes of mental derangement, which have fallen under my notice, have been excited by religious fear. The glowing and paſſionate language, the rude and frantic geſtures, the boiſterous and thundering tone, in which eternal anathemas are dealt out from the pulpit; in which

the terrors of hell are displayed by ignorant enthusiasts amongst the sectaries, at once appal and paralyze the minds of their poor uninformed auditors. One idea only, the prospect of eternal punishment, the image of hell before their eyes, occupies their judgment, rivets their attention. Confusion follows intensity of thought, and derangement confusion. Several times has it been my lot to observe the progress of cause and effect above described. In attending upon phthisical patients, I have frequently seen the few last moments of these poor wretches embittered by the intrusion of some religious fanatic, whose gloomy picture of futurity has produced derangement.

Case of Scorbutus, combined with Dyspepsia.

I first saw the Rev. Mr. H. a clergyman, resident about eight miles from this place, on the 5th of April, 1800. He then complained of great lassitude and debility, of pain and rigidity in the lower extremities, which were almost entirely covered on the fore part with large vibices of various colours, particularly brown and purple. Towards evening the legs were œdematous. The gums had just begun to be sore, painful, and to bleed upon being slightly touched. His nights were restless, and the sleep he got not refreshing. His pulse was small and quick, his bowels loose, his appetite very bad; he was frequently affected with gastrodynia, flatulence, and uneasiness after taking food. Upon enquiry into the previous history of the disease, I found that he had laboured under dyspepsia for several years, and that his bowels had been so much disordered that for two years he had not had a naturally-formed stool. He had not dared to eat vegetables for near two years past; his diet had principally consisted of toasted bread, gruels, and flesh meat, but of these he had eaten very sparingly, on account of the uneasiness which he experienced after taking them, as well as from anorexia. He led a sedentary life, and had been under the influence of grief for some time past. The whole of this case being recorded from memory, some time after the event, I cannot vouch for the accuracy of every minute particular, but am certain that the general statement will be found to be correct. The whole class of remedies necessary for the cure of scurvy disagreeing with my dyspeptic patient, I felt some difficulty in prescribing for him. Convinced, however, that the only chance for saving his life consisted in conveying remedies into the system, containing oxygen in a state easily to be decomposed, in order to enable the stomach to retain and digest suitable diet, I prescribed the following medicine:

R. Decoct.

℞. Decoct. cort. cinchon. ℥vij. Tinct. cort. cinchon. comp. ℥j. Confect. aromat. ʒij vel ʒiij. Tinct. opii gt. LXXX. M. ft. Apozem. partitis vicibus quotidie fumend.

I ordered him to have a pint of Port wine, and to eat half a dozen oranges daily; to take fome good broth, mixed with the juice of nettles (the only vegetable then exifting in that part of the country) and to eat broiled meat once or twice a day, according as the appetite would allow.

In cafe diarrhœa fhould recur during the ufe of the above remedies, I directed Mr. H. to take a tea fpoon full of infufion of logwood, with a few drops of tinct. opii after every loofe ftool.

I faw Mr. H. again on the 10th of April, when I had the fatisfaction of finding him, in every refpect, much better. The quantity of tinct. opii, of courfe, occafioned a good deal of drowfinefs, but it enabled his ftomach to retain both food and medicines. The ftrength and appetite had increafed very much; his ftools were regular and well formed; his pulfe was flower and ftronger. I could not obferve much alteration in the appearance of the blotches, but the gums were lefs fore, and the limbs lefs painful. I ordered his medicines to be continued, diminifhing the quantity of tinct. opii to fixty drops daily; he never had occafion to ufe the logwood. I directed him to take fuch freh vegetables as the feafon afforded.

On the 5th of May I found that he had continued gradually and regularly to recover fince my laft vifit. His appetite for food, both animal and vegetable, had become very keen, and he had eafily digefted it. He had gained much ftrength and flefh, and his pulfe was regular. Many of the vibices on the extremities had difappeared, and fuch as remained, inftead of being purple and brown, had become yellow. He now nearly difcontinued his medicines, ftill, however, perfevering in the ufe of a generous diet.

The hiftory of fcurvy originating from infufficient vegetable nourifhment, has been fo well explained and exemplified by Drs. Milman and Storke, that I fhould have confidered the recitation of this cafe totally unneceffary, had it not been on account of its complication with dyfpepfia. Independent of the cure of the fcorbutic fymptoms, the relief that was afforded to the dyfpepfia was greater than could have been calculated upon in the given time. A day or two before I faw him, Mr. H. eat part of an orange, which occafioned much uneafinefs in the ftomach and bowels. Yet, a fhort time after I faw him, when under the influence of opium, the prima viæ were able to digeft daily, without annoyance, fix oranges, befides broth, with nettle juice, animal food, and wine. In cafe the opium had

not produced the desired effect, the inhalation of oxygen gas would have been the only probable mean of saving life; but, from the situation in which my patient was placed, the administration of it would have been attended with much trouble and inconvenience.

Two other instances have occurred to me, within the last twelve months, of scurvy produced by a meagre and insufficient diet, which readily gave way to the usual remedies.

Case of the fatal Effect of Opium obviated.

On the 30th of September, 1800, I was sent for to see J. R. a young man about 19 years of age, who, an hour before, had taken an ounce of laudanum, with a view of destroying himself. He was then in a deadly stupor, and his pulse 120 in a minute. I ordered him to be stripped, and directed two men to rub his body and limbs very freely with salt, which was persevered in, with occasional short intervals of rest, for upwards of four hours. As soon as any particular part became hot, or had a tendency to excoriate, I ordered the men to discontinue the friction on that part. He had already taken a large dose of ipecacuanha; I afterwards gave him half a drachm of vitriolated zinc, dissolved in one ounce of water. It was got into him in this way: Two tea spoons full were put into his mouth, he being laid on his back; his nose was then irritated with a feather dipped in liquor volat. cornu cervi, upon which he was roused, and deglutition took place. In this way the juice of three lemons was got into him. The emetic did not operate for more than an hour, and at last vomiting seemed to be effected by irritating the throat with the feather mentioned above. Afterwards he had administered to him, in the same way, some wine and water, and a mixture with æther and cordial confection. Stimulating the nostrils roused him for a few seconds, and made him exert considerable muscular strength, but he relapsed again immediately into his former stupor. I ordered his nostrils to be irritated every ten minutes. He took the laudanum at eight o'clock in the evening, and the stupor did not leave him until two o'clock in the morning. At eight o'clock, A. M. he seemed perfectly recovered, complaining only of soreness in consequence of the friction.

The indication to be kept in view in obviating the effect of opium, appears to be, as pointed out by Dr. Seaman, to produce such a degree of irritation as to counteract its soporific quality. With this intention I prescribed the emetic, the stimulation of the nostrils with liq. volat. cornu cervi, and the friction

friction with ſalt. Nothing occurred to me ſo likely to produce an equable irritation without ſubſequent injury, as friction with ſalt. The effect it produced fully anſwering my expectation, I gave the lemon juice more in compliance with cuſtom, than from any dependance on its antidotal operation. The ſtomach is rendered ſo torpid by the opium, that very little effect can be produced by the exhibition of internal remedies.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

I Encloſe you a caſe, probably ſomewhat remarkable for the rapidity of recovery, when the extent of injury and nature of climate in which it happened, the Weſt Indies, ſuppoſed ſo very unpropitious to the healing of wounds, are conſidered.

The ſucceſs attending this operation, as well as ſome others equally important, may be in a great degree aſcribed to our having many opportunities of procuring ſupplies of freſh vegetables, which had the power of obviating prediſpoſition to ſcurvy amongſt the ſhip's company I belonged to; a tendency of the habit to be guarded againſt by every poſſible means, where action is expected or energy required. I am,

GENTLEMEN,

No. 20, *Edgecumbe Street, Stonehouse,* *October* 20, 1800.

Your obedient ſervant,
JAMES VEITCH.

P. S. In my letter to the Commiſſioners for Sick and Wounded Seamen, you have made a ſmall miſtake, by ſubſcribing me *Veiten* inſtead of *Veitch*, which you will oblige by correcting.

May 28, 1797, John Spencer, aged about twenty, in handing the main-top gallant ſail, fell from the yard, and fractured the right parietal bone. On being informed of the accident, I could not help thinking my interference, from the height being ſo very conſiderable, 116 feet, would amount to no more than what is expected by the phyſician or ſurgeon, when they adminiſter a placebo, merely to gratify relatives, conſcious that their patient is irretrievably loſt; but the reſult ſhews how erroneous opinions, formed without exact inveſtigation of the extent of injury, may prove. He was ordered to be carried under

under the half deck, the place appointed for the reception of the ſick, and fortunately it was not crowded, there being only one man in the ſick birth, on whom I had operated for Empyema. The ſcalp preſented a wound rather irregular, running in ſome degree in the direction of what is called the ſuperior poſterior proceſs of the parietal bone to that of the anterior inferior, and it was ſo large as to admit no doubt that conſiderable injury was inflicted on the ſkull, for I found by the moſt ſuperficial examination, extenſive fracture with depreſſion, attended with ſymptoms which indicated this; laborious reſpiration, coma, intermitting and ſlow pulſe. The wound inflicted by the fall was rendered more extenſive, and then conical, my knife acting in ſubſervience to the higheſt reſpect for the covering parts. The ſcalp when raiſed, brought to light an extenſive fracture of the parietal bone, with depreſſion and infraction, following the direction of the external wound which had been inflicted by the fall, and only connected firmly at one point, (which depreſſed bone reminded me of a peninſula) but ſeveral parts of the undepreſſed parietal bone followed the principal depreſſion, and in themſelves formed each a ſource of compreſſion; features in the face of the fracture, that induced me to form the reſolution of removing the depreſſed piece of bone entirely, provided, after an application or two of the trephine, this piece, with the compreſſing points, could not be elevated. The branches of the temporal artery were allowed to bleed freely, notwithſtanding he had loſt blood from the arm to ten ounces, which practice, the injury done the brain and membranes will juſtify. Being unable to accompliſh my object, by attempting elevation to the extent mentioned, the trephine was applied four times at thoſe points noticed; and as they were by theſe applications removed from acting on the brain, and the depreſſed piece likewiſe much diſengaged, I judged it time to inſulate by dividing the connection with the parietal bone. On examining the depreſſed piece of bone, I found the internal lamina fractured conically, and projecting from the line of health, and in itſelf capable of acting as a compreſſing cauſe on the brain.* The ſcalp was now returned as nearly as poſſible to its natural ſituation, and the wound covered with light and ſimple dreſſing; he was put into a cot, as admitting more freely the circulation of air round the body, to carry off ſuperfluous heat, than a hammock, and an opiate was adminiſtered. He was laid on his left ſide. This accident happened in the morning; and it is almoſt unneceſſary to ſay,

I ſaw

* Even a part of the internal lamina was detached at the point laſt divided.

I saw him repeatedly during the day; at night an anodyne draught was given him, and nothing unpleasant occurred until about twelve o'clock, when I was informed Spencer was in a dangerous way. On visiting I found him much convulsed, with intervals of ease, which caused me to order forty drops of laudanum, and this was repeated within an hour, without producing any good effect. The wound was undressed and examined, and I had the satisfaction to discover the cause of convulsion in this case, in a small fragment of bone lodged partially in the substance of the brain, and which had escaped my notice in dressing the wound. Were not these convulsions proof of returning sensibility? and from which appearance, on taking away the hostile cause, was there not reason to infer more favourably? The removal of this foreign body was soon succeeded by tranquillity, and the following day he was able to give a distinct answer, and name the objects presented to him.

℞. Fol. Sennæ, ʒvj. Crem. tart. ʒj. Fruct. tamarind, ℥j. Aq. font. Bul. ʒviij. Macera. per hor. dein. cap. ʒij. omni 2ª hor. don. purg.

It would prolong this case to give a detail of his daily treatment. He was kept low while there was any thing to be apprehended from symptomatic fever; opiates combined with sudorifics were given at night, and the wound and bowels regularly attended to. In a month from the date of the accident, the wound was almost completely healed, and he had walked about the sick birth eight days, and been from bed daily for twelve. In this case, the dura as well as pia mater were not only injured, but such was the force of the fall, that part of the brain was forced through the interstices of the fractured bone. The trepan recommended by very eminent authority for commencing this operation, is not a very admissible instrument in operating at sea, where the motion of the ship renders it so difficult to act with steadiness, even with the trephine.

In injuries of the brain, where we suppose every thing required, is done by operating, and that are followed by convulsions, this case may not only offer a strong inducement to examine the wound, in order to discover the cause of these morbid actions, but it points out the propriety of not deserting such accidents as a forlorn hope; because from measurement of the extent of injury the brain has sustained, it will frequently give rise to a mode of reasoning that may deceive the surgeon himself, and lead him to suppose the mischief done his patient is not to be relieved by the resources of his art.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IN your Journal for October, a caſe of death from the effects of poiſon appeared, communicated by an ingenious gentleman, Mr. Frederic Thackeray, of Emanuel College, Cambridge. Upon peruſing it, I am induced to ſend you the following caſe and diſſection, which, if you think of ſufficient conſequence to be inſerted in a Journal which very deſervedly ranks high in the eſtimation of medical men, from the candour with which it is conducted, and likewiſe from the many valuable facts with which it abounds, all tending to the promotion of the moſt liberal of all ſciences, the ſcience of medicine, it is much at your ſervice; and if it conveys any information, or if it throws any new light upon the effects of poiſons taken into the alimentary canal, it will prove a ſource of no ſmall ſatisfaction to,

GENTLEMEN,

Your obedient and very humble ſervant,

JAMES HUME SPRY,

Member of the Royal College of Surgeons, London.

Alderſgate Street, Oct. 30, 1800.

The ſubject of this caſe was an unfortunate young woman, about 27 years of age. I was deſired to viſit her on Monday the 13th of October, about five o'clock in the afternoon; ſhe was reported to be in fits, to which it ſeems ſhe was occaſionally liable.

She was, when I ſaw her, totally inſenſible, agitated by convulſive motions of the whole frame from head to foot; the muſcles of the eyes were much convulſed, and upon elevating the eye-lids, they were rapidly moved in different directions, according as the ſpaſms affected the different muſcles: the pupils were not in a ſtate of dilatation, but rather contracted; light did not appear to have much effect upon them. A viſcid frothy ſaliva oozed from her mouth, which ſeemed ready to obſtruct her breathing; reſpiration was performed with rapidity; ſhe ſighed frequently, and it ſeemed as if there was great oppreſſion about the heart. She moaned conſtantly, as if in great pain; but gave no evidence of ſenſibility, unleſs preſſure was made upon the pit of the ſtomach, when ſhe moved her hand and arm, as if the preſſure gave pain; this part felt unuſually hot to the hand. She was in a very profuſe perſpiration, which had

had a very faint earthy ſmell; her pulſe was very ſmall and frequent, but varied occaſionally; her ſtools and urine paſſed involuntarily: theſe ſymptoms gradually increaſed, excepting that the convulſive motions ſubſided, as the comatoſe ſymptoms advanced: The following day, about three o'clock in the afternoon, ſhe breathed her laſt, after having ſuffered the moſt dreadful torments.

From the whole appearance of the patient, which was ghaſtly in the extreme, and from the peculiarity of the different ſymptoms, at the ſame time taking into conſideration the perfect health ſhe enjoyed the preceding day, I had no difficulty in pronouncing, that her death was the conſequence of poiſon: When ſhe took it, or what it was ſhe had taken, was not poſſible to be aſcertained correctly; but from her having been obſerved to be in health on Monday morning, previous to my being called in, which did not happen till the afternoon, it was reaſonable to ſuppoſe, that ſome time during the fore part of that day the fatal potion had been taken.

On Wedneſday, the morning after her deceaſe, in preſence of three medical gentlemen, I examined the body, and the morbid appearances were as follow:—

Upon taking a general view of the body, no external mark of diſeaſe was perceived, if we except that ecchymoſis had taken place in various parts of the back, evidently owing to theſe parts being bruiſed during the convulſive paroxyſms. Putrefaction did not appear to have made much progreſs. Upon opening the thorax, the viſcera contained in it were in general ſound and healthy; the lungs remarkably ſo: the pericardium contained a very ſmall quantity of water: the heart appeared perfectly free from diſeaſe; but upon opening the left ventricle, a polypous connection of coagulable lymph extended through the arterial orifice of the ventricle into the aorta. The œſophagus, as it paſſes down the poſterior part of the thorax, was examined, and was remarkably diſeaſed; it ſeemed to have ſuffered the action of ſome very acrid or cauſtic ſubſtance; the inner membrane, or coat, being in many places deſtroyed; in ſome places it appeared of a whitiſh colour, reſembling the ſlough which is produced by argentum nitratum; in others, gangrenous ſpots were ſituated, and extravaſation of blood had taken place in many other places. Upon opening the abdomen, the viſcera appeared healthy in general; the inteſtines were not particularly diſtended by air; neither was there any particular mark of diſeaſe in the external appearance of any of them, excepting the ileum. The ſtomach, when cut into, ſhewed ſimilar marks of diſeaſe with the œſophagus;

near the cardial orifice, there was a ſmall hole* through the villous and nervous coats; adjacent to this hole were a conſiderable number of ſmall red ſpots, which ſeemed to be extravaſations of blood; theſe ſpots occupied a ſpace of about two ſquare inches; the villous coat was eroded in various places; the lower part of the ſtomach was corrugated in a very remarkable manner; (the corrugations were not much unlike the valvulæ conniventes in the ſmall inteſtines) the blood veſſels of this viſcus were not much diſtended; the ſtomach contained about four ounces of a thick viſcid matter, of a dark green colour; the duodenum, jejunum, and ſuperior part of the ileum, were not viſibly diſeaſed; the lower portion of the laſt mentioned inteſtine, for the ſpace of three feet, was very much diſeaſed, both externally and internally; the ſmall veſſels on the ſurface were much diſtended with blood, and appeared as if finely injected. Internally, the villous coat was entirely deſtroyed; the contents of this portion of the ileum were much tinged with blood, from the blood veſſels of the inteſtine being eroded; immediately below that portion of the ileum which was moſt diſeaſed, and between ſeven and eight inches from the valve of the colon, an intus-ſuſceptio was found; and about four inches below it was a ſecond. The effects of the poiſon were not viſible below the ileum; the large inteſtines ſeemed quite in their natural ſtate; the remainder of the abdominal viſcera were perfectly free from any morbid affection whatever: the uterus was unimpregnated.

The contents of the ſtomach and inteſtines were of a ſimilar nature; and I very much lament, that all the experiments which were made to aſcertain the nature of the ſubſtance, or poiſon, which had been ſwallowed, proved abortive.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

I Have read with pleaſure in your uſeful Journal the various proofs which have been adduced in ſupport of the benefits likely to acrue to the community by the introduction of VACCINE INOCULATION.

But, although willing to allow the new practice the merit of

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* This hole, or ulceration, was ſufficiently large to admit a pea.

of inducing a more mild diſeaſe than that which variolous inoculation, with all its improvements, can *always* promiſe; yet, it occurs to me, that the ſuperiority of vaccine over variolous inoculation, is ſomewhat over-rated, when *it alone* is aſſerted to be incapable of producing infection, except by actual contact.

This ſuperiority will not, perhaps, on a ſtrict examination, be found to obtain. The common prejudice, that variolous inoculation gives origin to a contagious diſeaſe, or is itſelf contagious, it may not be impoſſible to remove.

The improved variolous inoculation would have been more extenſively uſeful, had it not been for this objection, which has been propagated with ſome other objections, which it has ſurvived, by medical perſons of this country and century.

The other objections to the practice of inoculating ſmall-pox have, in a great meaſure, been long ſince abandoned by men of the ſame claſs with thoſe with whom they originated, — I allude to the ideas of the danger to be apprehended from a double infection; the great danger of communicating with the variolous matter, ſcrofulous and other diſeaſes; and the inſecurity which it has been ſaid the practice afforded; inſtances having every now and then, during its infancy, been related, of perſons having natural ſmall-pox after a previous inoculation.

Theſe objections, I ſay, to variolous inoculation, are given up by profeſſional men; but the other, the contagious nature of the diſeaſe induced by this inoculation, is ſtill entertained by many men of eminence in the profeſſion.

It would have been fortunate for mankind, and particularly ſo for the inhabitants of the cities of London and Weſtminſter, and the places adjacent, if the poor multitude would have parted with their prejudices, relative to variolous inoculation, and which they had imbibed from their ſuperiors in knowledge, at the time when the latter could have wiſhed: But they have neither been ſo complaiſant to others, or ſo friendly to themſelves.

Practitioners who are reſident in the above places, know very well, that when ſmall-pox is in a houſe where there are many children and adults liable to the diſeaſe, the propoſal to inoculate, gratuitouſly, all thoſe who are not exempt, is too often diſregarded by themſelves or relations.

It is in vain that we expoſtulate in theſe ſituations, and endeavour to convince them of the non-exiſtence of a double infection, or of an accumulation of diſeaſe; for the contrary opinion is too firmly impreſſed to be eaſily obliterated.

Were it not on account of this unhappy perſuaſion, which, it would ſeem, cannot be parted with by the loweſt claſs of

people, together with the no leſs unfortunate one, exiſting ſtill in the minds of well-informed men, namely, that the variolous inoculation is contagious, the Bills of Mortality would exhibit a far leſs number of deaths from ſmall-pox than they have heretofore done; inasmuch as in ninety-nine inſtances in every hundred, we ſhould be able to anticipate the caſual ſmall-pox, which probably would prove fatal in a great number of caſes, by the production of a diſeaſe ſo mild in its operation, as in a general way to occaſion little or no inconvenience under a judicious mode of treatment.

But experience has proved, that ſometimes, and under the moſt judicious management, an adverſe caſe will preſent. Vaccine inoculation is recommended to the public as a ſubſtitute, not, as I apprehend becauſe no adverſe caſe has ever occurred, or will ever occur, but, becauſe the number of theſe is likely, from our preſent experience, to be conſiderably leſs than from the variolous.

Now, as few phyſicians would aſſert poſitively, that no unfavourable event can poſſibly happen from an employment of the ſubſtitute, parents may be found who poſſibly may obſerve, we are not anxious to have an unneceſſary diſeaſe, obtruded on our progeny to which they are not obnoxious; as from the evidence which we have of the ſafety of the variolous inoculation, we ſhall prefer the human to the vaccine diſeaſe. That the ſubſtitution of a diſeaſe of brute origin will meet with oppoſition from ſome perſons is apparent; for Dr. Waterhouſe finds it neceſſary in America to change the name of it. The Doctor has obſerved, that people revolt at the term Cow-pox.*

I ſhall not, I imagine, be ſuſpected by any of your readers, of an intention to create prejudices in the minds of the common people againſt the new inoculation, while I make my obſervations on it, through the medium of a vehicle with which they are unacquainted. If this inoculation be readily accepted by the public, as a ſubſtitute for the former, or with the view of exemption from caſual ſmall-pox, it will meet with a more favourable reception than the other has done; and a favourable reception it ought to meet with, or the ſanguine expectations of ſome writers on the ſubject will never be realiſed.

I have ſaid that the ſuperiority of vaccine over variolous inoculation is ſomewhat over-rated, when it is aſſerted, that *it*

* See Med. and Phys. Journal, No. XXI. p. 471.

it alone is incapable of communicating infection through the medium of the atmoſphere.

" The ſmall-pox are chiefly deſtructive to the poor; the rich, for the moſt part, ſecure their children from the caſual ſmall-pox by inoculation; but this is done at the riſk of their leſs intelligent neighbours. Thus an operation which confers an invaluable bleſſing on the few intelligent individuals who adopt it, becomes injurious to the leſs intelligent part of the community. Humanity calls aloud on us to ſubſtitute a diſeaſe that brings ſecurity to thoſe who ſeek it, and ſpreads danger to none."†

Thus is the character of the one inoculation magnified at the expence of the other. It would be taking up too large a portion of your publication at preſent, to proſecute the intended enquiry, whether this charge which has been made againſt the variolous inoculation, be well or ill founded. But ſhould you be of opinion that theſe remarks are not altogether irrelevant, and give them a place in the next Number, I will endeavour to ſend you a communication for a future one; to evince that the above charge is without foundation. I am,

GENTLEMEN,

Smith Street, Weſtminſter,
November 7, 1800.

Your obedient humble ſervant,
JOHN FRANKS.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

I Encloſe you a further ſtatement of the reſult of my practice with the Fox-glove in Pulmonary Conſumption. It has, hitherto, anſwered all my expectations; and I am every day more and more convinced of the deciſive ſalutary powers which this medicine exerts over a diſeaſe which has, until very lately, baffled all the efforts of our art.

Conſcious of the rectitude of my intentions, and of the accuracy with which my details have been given to the public, I ſhall preſs forward, totally regardleſs of what *petulance* and *abuſe* may ſcatter in my path.

To the objections of any individual, when propoſed with liberality and in the ſpirit of improvement, I am ever ready to liſten

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† Vide Dr. Cappe on the Cow-pox, No. XXI. p. 438.

liſten with deference and attention; but *mere ſcurrility* neither merits nor admits of a reply. I am,

GENTLEMEN,

With great reſpect,

Your moſt obedient ſervant,

Hadleigh, Suffolk
November 6, 1800.

NATHAN DRAKE.

My views in publiſhing the two caſes of Marris and of Grimes, were to arouſe the attention of the medical world to the ſingular and hitherto unobſerved powers of the Fox-glove in conſumption; by this mean, a body of evidence, either for or againſt the utility of the medicine, might ſhortly be expected. The Digitalis had previouſly been exhibited in this complaint but in very few inſtances; thoſe recorded by Dr. Darwin being the only caſes, I believe, known to the public; and in theſe, the plant was exhibited merely with the view of promoting temporary ſickneſs and conſequent abſorption.

My intentions in preſcribing the Fox-glove in phthiſis were, however, widely different; and the reſult of the trial evinced an energy equally novel and unexpected. It was my wiſh to produce its full influence on the circulating ſyſtem, and this too, gradually and independent either of nauſea or ſickneſs, yet productive of rapid abſorption: Theſe objects I obtained; and in effecting them, diſcovered, that by a cautious uſe of the ſaturated tincture, the circulation might not only be depreſſed, and that to a very conſiderable degree, but for any given length of time, and without much inconvenience, or any danger to the patient. Two gentlemen labouring under confirmed phthiſis were, under this plan, completely cured; and I thought it my duty to announce to the world, as ſoon as poſſible, events ſo unexpectedly fortunate. I alſo ventured to draw from the reſult of theſe two caſes, the following inference, that as the Digitalis had re-eſtabliſhed health in the moſt confirmed ſtate of phthiſis, it might, in its earlieſt ſtage, be expected *generally* to prove ſucceſsful.*

That I have acted thus; that I have publiſhed theſe caſes, and drawn this inference, is to me, in the preſent ſtage of my experience with the Fox-glove, a matter of the higheſt ſelf congratulation. To ſtate this experience, forms the principal object of the preſent paper; but, before I enter upon it, it will be neceſſary to premiſe a few obſervations.

I have been for near ten years in the habit of preſcribing the powder

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* Vide Contributions to Phyſical and Medical Knowledge.

powder of Digitalis in anaſarcous caſes; my friend and predeceſſor, Dr. Gibbons, for better than fifteen: Our experience has taught us, that, although it will ſometimes ſtrongly influence the circulation, independent of any action on the ſtomach, yet it is very apt, even in the moſt guarded doſes, to produce exceſſive nauſea and ſickneſs, effects very frequently uſeful, and even neceſſary in promoting its diuretic action: As, however, to induce this action was no object in my view, and as I particularly wiſhed to avoid its effects on the ſtomach, and at the ſame time to introduce it gradually, and for a long period into the ſyſtem, I choſe the ſaturated tincture as the preferable preparation; and as this has anſwered all my expectations, I have not been tempted, except in one inſtance, which will be mentioned hereafter, to exchange it for any other.

Even the ſaturated tincture will too frequently affect the ſtomach, if not given in the moſt cautious manner; and I have obſerved, without a ſingle exception in *my* practice, that ſickneſs has uniformly been pernicious to the patient, and has ever interrupted the progreſs of the cure. To obviate this, I have lately given the tincture in ſo very gradual a manner, that the patient uſually takes it a fortnight or longer, before any deciſive effects are felt on the ſyſtem. I increaſe the doſe but by one drop per day, or at moſt, by one drop per doſe; and I have now a patient under my care who is taking eighty-eight drops daily, and who, for theſe laſt three months, has taken from fifty to this quantity per day, without even the ſmalleſt nauſea, and without any affection of the head, which could be termed troubleſome, although his pulſe, which, before the uſe of the tincture, beat about 100 ſtrokes in the minute, has been during this period never, upon the average, above 60; once as low as 36, frequently not more than 50.

I continue to uſe the ſaturated tincture made in the proportion of five ounces of proof ſpirit to one ounce of the coarſely powdered leaves. A few ounces of what was made laſt year are ſtill in my poſſeſſion; not the leaſt depoſition has taken place, and the colour is as deep, and the tranſparency as great, as when the tincture was firſt filtered.

This year I have gathered, along with Meſſrs. Travis and Bunn, a large quantity of the plant; and as we had an immenſe variety to ſelect from, we choſe only the fineſt ſpecimens, and, I believe, brought home none under the height of five feet; a great number was, I am convinced, more than ſix feet high, ſome much higher; the talleſt plant, and in every reſpect the fineſt, from the number of its lateral branches and the multiplicity of its leaves, meaſured, when freſh gathered and independent of its root, ſeven feet ten inches. The moſt vigorous

vigorous plants we have obſerved invariably to grow where the deepeſt ſhade is afforded them; and this might be expected indeed, excluſive of individual authority, from the ſituation the Digitalis holds in the natural order of the Linnæan ſyſtem, the LURIDÆ. Under this arrangement it has for *Congenera* the *Solanum Lethale*, the *Hyoſcyamus*, *Datura*, &c. plants well known to thrive only beneath the protection of much ſhelter.

In the 8th Number of this Journal I have mentioned, that no opportunity of exhibiting the Digitalis in incipient tubercular conſumption had, at that time, occurred to me. Since that period, however, I have attended four patients previous to the commencement of the ſuppurative proceſs, and ſix in whom a copious purulent expectoration had for ſome time been eſtabliſhed. I now proceed to ſtate theſe caſes and their reſult, to which I ſhall occaſionally ſubjoin a few obſervations.

CASE I. *Martha Howlett*, of Dedham, Eſſex, aged 28, has been ſubject to a violent cough for two years, and has now, March 29, 1800, when ſhe applied to me, a pulſe beating 120 in the minute. Her expectoration amounts to about a tea-cup full in twenty-four hours, but has no purulent appearance; her breathing is very difficult, and ſhe has had for ſome months profuſe colliquative perſpiration; her cough is almoſt perpetual, and her emaciation is very great: ſhe complains of cold ſhivering fits, and of being frequently fluſhed after her meals; appetite gone; great languor; thirſt conſiderable, but the tongue not foul; body regular; menſes regular; urine of a natural colour; ſleep much diſturbed.

I ordered her ten drops of the tincture of Digitalis twice a day; and in a letter to her ſurgeon, Mr. Fox, of Dedham, requeſted they might be gradually increaſed. On the 31ſt of May, 1800, I received a letter from Mr. Fox, from which I have taken the liberty of extracting the following paſſage:

"I have purpoſely delayed giving you an account of Martha Howlett, until I could offer you my congratulations on the ſucceſs of the Digitalis you preſcribed for her.

"The pulſe now continues ſteadily under 60; her cough has nearly ceaſed; her breathing is free and eaſy; and her appetite and ſtrength appear reſtored to their healthy ſtandard; a tendency to ſyncope, however, and ſome depreſſion of animal power, rendered neceſſary a retrogade doſe in the exhibition of the Digitalis. I have not yet been able to adminiſter more than fifty drops in the twenty-four hours. I now give her only thirty every night; but which I mean again to advance, until the cough has totally ceaſed.

"But, to do you proper juſtice, I have ſent her, that you may judge for yourſelf. Indeed, I have no doubt whatever that

that the Digitalis has thus far removed a malady, whose formidable degree gave me every reason, from observation of past events, to believe that death would, as usual, soon inevitably have finished the scene."

I agreed with Mr. Fox in the propriety of again increasing the dose of Digitalis; and in a subsequent letter he informs me, that "he could never exceed thirty-five drops twice a day, and that but for a very short time; thirty, twice a day, was the usual dose, which she continued TEN weeks; her pulse was never depressed much below 60."

Towards the latter end of August I called upon her, and was happy to find her restored to full vigour and health, free from every complaint except an hoarseness, which she had acquired a week or two before I saw her, by exposure to cold in washing.

Case II. *Miss Bridgman*, aged 27, of ———, near Diss, in Norfolk, has for several years been subject to a very great, constant, and almost singular rapidity of circulation, her pulse usually beating from 120 to 130 strokes in the minute; she has likewise had for several years a most troublesome and very frequent cough, attended with great difficulty of breathing upon motion. There has never been any expectoration, but the prostration of strength and the emaciation are extreme; the nightly perspirations also are frequent, but not very copious; she has little or no appetite, and has lately been subject to diarrhœa, which is now only checked by the use of opiates. Menses deficient. She has had the advice of many eminent practitioners.

Shortly after her arrival at Hadleigh she was placed under my care, and I ordered her, on April 19, 1800, ten drops of the tincture of Digitalis twice a day, in a slight infusion of quassia and cinnamon, and an opiate pill at bed-time. The tincture was cautiously increased for two-and-twenty days, until the quantity taken in twenty-four hours amounted to fifty-two drops, and the pulse gradually, during this period, fell to 80.

Under the exhibition of the Digitalis, languor and occasional nausea were felt; and, at length, when the pulse had dropped to 80, so much tendency to syncope took place immediately after each dose, that I thought it necessary to discontinue the tincture. The cough, however, had been for some time much better; the irritation was greatly mitigated; the appetite increased, and the strength evidently improved; nor did her pulse, upon the omission of the Fox-glove, acquire its former velocity, though it rose much beyond the healthy standard.

I now prescribed for her a preparation of cinchona, myrrh, and prepared kali, in the form of a draught, twice or thrice a

day; and after each dose she was directed to take a table spoonful of lemon-juice. This agreed very well; her appetite became keen, and the powers of muscular motion increased. In this situation she returned home, and I requested her surgeon, Mr. Harrison, of Diss in Norfolk, to resume the Digitalis as soon as her strength should be so far improved as to admit of its being safely tried. This gentleman wrote to me occasionally; and his last letter, dated October 7, includes the following satisfactory account:—

"I am particularly happy in communicating to you Miss Bridgman's amendment, which has taken place since her commencement with the Digitalis, (TEN weeks since): for the last three weeks she has taken thirty drops twice a day; no unpleasant symptoms have occurred from it; I have not found the pulse more than eighty for this last month, twice in that period not quite so many; from increase of bodily strength, she is able to take more exercise, and without fatigue; her cough is less troublesome, her breathing less laborious, and her appetite good, with every symptom of increased health.

"November the 5th. I have this day heard from Miss Bridgman, through the medium of her brother; she continues the Digitalis, which she has now taken FOURTEEN weeks; her health has progressively improved since October the 7th."

The very rapid, constant, and long continued quickness of circulation is, in this case, most remarkable; I could not have previously conceived, that a pulse of near 120 could, for so extended a period, have been compatible with life; nor did I think the Digitalis would have exerted an influence so decided and salutary, where the circulating system had been so long habituated to movements of such unusual velocity.

CASE III. *Sarah Hammond*, aged 17, complains, June 13, 1800, of great difficulty of breathing, great stricture across the chest, and of pain in her left side; pulse near 120, skin hot, thirst not considerable; has cold shivering fits twice a day, and copious colliquative perspirations toward morning; has little appetite; her strength is much impaired, and the emaciation considerable; not much cough, and no expectoration; tongue foul, and of a brown colour; body very costive. The catamenia have not appeared for three months. She has been twice attacked with similar symptoms, which were removed, under the care of Mr. Travis of Bergholt, by tonics and preparations of steel. She has lost a sister in consumption, whom I attended some years ago.

Mr. Travis, when called in on June 13, ordered her, in the first place, a purging draught, then a saline mixture with myrrh,

myrrh, and afterwards ſome tonic pills with ſteel; ſhe had alſo a bliſter on her ſide, and was bled; the blood appeared ſizy.

As no benefit was derived from this plan, he ordered her, on June 30, ſeven drops of the ſaturated tincture of Digitalis thrice a day; theſe were gradually increaſed to ſixteen thrice a day, and ſhe was under the influence of the medicine for a month. During this period her ſymptoms gradually diſappeared, and her pulſe ſunk to the ſtandard of health. She experienced no ſickneſs, naufea, or giddineſs of the head, but complained of being frequently very ſleepy.

For the particulars of this Caſe I am chiefly indebted to Mr. Travis, as I had an opportunity of ſeeing the patient but once. On September 2, ſhe was, in all reſpects, perfectly well.

Case IV. *Mrs. Salmon*, of St. Oſyth, came to Hadleigh on October 2, 1800, to conſult Dr. Gibbons and myſelf. She has been ſubject for ſeveral months to a violent and frequent cough, with conſiderable difficulty of breathing and profuſe colliquative perſpirations; has frequent ſhivering fits. There are much emaciation and great debility preſent. Pulſe 124, and weak; ſkin hot; body regular; urine natural; appetite nearly gone; no expectoration.

We ordered her ten drops of the tincture of Digitalis twice a day, in an infuſion of quaſſia and orange-peel, to be gradually increaſed to twenty, morning and evening.

October 21ſt. Though only nineteen days have elapſed, nearly all her ſymptoms have diſappeared, and her countenance has the appearance of health. We have ſeldom witneſſed a more rapid amendment. Her pulſe beats but 66 in the minute, and her breathing is perfectly eaſy. The cough is gone; the perſpirations are removed; the appetite is keen; the ſtrength greatly improved, and ſhe takes ample exerciſe daily without fatigue. Has felt ſome giddineſs and tremor after taking each doſe of the medicine, but no naufea.

Of theſe four Caſes of incipient phthiſis, the firſt, the ſecond, and the fourth, I conſider as examples of phthiſis ſcrophuloſa; the third, an inſtance of phthiſis chlorotica. With regard to the ſecond caſe, though I am convinced, from every ſymptom, that tubercles had long exiſted in the lungs, yet I am of opinion, had the Digitalis not been interpoſed, and the diſeaſe had been ſuffered to run its courſe, that the purulent ſtage would, nevertheleſs, not have ſupervened, but that the patient would have been gradually worn down by the continued rapidity of the circulation, and the increaſing cough and difficulty of breathing.

I now proceed to thoſe caſes in which the purulent ſtage had been for ſome time eſtabliſhed.

Case V. *Anne Bush*, of Dedham, aged 28. May 14th, 1800; has been ill for ſix months, and during that period, gradually getting worſe; ſhe complains now of great difficulty of breathing, of violent cough, and of acute darting pain in her left ſide; her pulſe is weak, and beats 110 ſtrokes in the minute; ſhe has had for ſeveral weeks a heavy purulent expectoration, amounting to about half a pint in twenty-four hours; has frequent ſhivering fits, and copious colliquative perſpirations: the leaſt exertion exhauſts her, and ſhe is reduced to a mere ſhadow; thirſt conſiderable; appetite nearly gone; ſkin dry and hot; and ſhe is much flushed in an evening; her menſes have been for ſome time ſuppreſſed.

I ordered her eight drops of the ſaturated tincture twice a day, and theſe were ſoon increaſed to twenty per day; but the morning doſe then occaſioning ſome giddineſs, I requeſted the twenty drops might be given only at night. She never reached more than thirty drops per night, but the effect upon the circulating ſyſtem was great and permanent. On the 31ſt of May, her ſurgeon, Mr. Fox, informs me by letter: "Your patient, Anne Buſh, I conſider much better; her circulation is much ſlower, and the cough leſs. I have not been able to give her more than twenty drops in twenty-four hours, which I now give at night, as you directed." Soon after this period ſhe increaſed her drops to thirty; but on the 7th of July, Mr. F. tells me, "I have lowered the doſe of Digitalis to twenty-five drops every night, as your patient has complained of much giddineſs. Her cough and expectoration are now but little, and her circulation ſteadily at or under 60; but the pain in her ſide is ſtill troubleſome, notwithſtanding repeated bliſters; I therefore recommended her to ſee you once more."

I directed an iſſue to be cut in her ſide, the diſcharge from which, in a ſhort time, relieved her pain. She was under the influence of the Digitalis for SEVEN weeks; and ſhe took it, latterly, in decoction of bark, making uſe at the ſame time of a generous diet. She is now, Auguſt 30th, 1800, perfectly well, with a pulſe of 68. I ſaw her during this period ſix times. She experienced, though the quantity of tincture was ever ſmall, a conſiderable degree of languor and much giddineſs, and had uſually an intermitting pulſe.

Case VI. June, 1800. *Anne Hart*, aged 16, has a copious purulent expectoration, amounting to better than half a pint per day; pulſe 128, ſmall and weak; night ſweats profuſe; cough violent, with great palpitation of the heart and difficulty of

of breathing; complains of ſhivering fits morning and evening; ſkin hot, body regular, thirſt conſiderable, appetite totally deſtroyed, emaciation extreme, and debility ſo great as to be generally confined to her bed. Has never menſtruated.

Her ſymptoms aſſumed a very ſerious aſpect in December 1799, at which period ſhe was ordered, by Mr. Travis of Bergholt, a mixture with myrrh and ſteel, which ſhe continued until February 27, 1800, with ſome benefit; but on April 5th, her complaints having returned with increaſed violence, he gave her the tincture of Digitalis in very ſmall doſes, which in a ſhort time mitigated, and for a few weeks nearly ſuſpended, the moſt preſſing and dangerous ſymptoms; ſhe relapſed, however, toward the latter end of May; and in June I ſaw her labouring under the circumſtances above deſcribed.

I requeſted ſhe might reſume the Digitalis, and continue it ſteadily for ſeveral weeks. She began with five drops three times a day, which were very cautiouſly increaſed to eleven three times a day, the greateſt number ſhe could ever take without ſickneſs.

July, 1800. She has taken the tincture for near five weeks, and appears to me greatly relieved by it, and her ſtrength is ſo much increaſed that ſhe has been able to walk to Mr. Travis's to meet me. Pulſe 100. Ordered to continue the tincture.

September, 1800. Met her again at Mr. Travis's; ſhe has regularly taken the tincture ſince July; her pulſe is now only 90, and has never, I underſtand, dropped lower; cough entirely removed; expectoration has for ſeveral weeks diſappeared; has had no perſpirations for a month; appetite good; ſleeps well; body regular; ſkin cool; ſtrength improving; but has gained little fleſh.

November 3d, 1800. She is now ſo much altered for the better in her perſonal appearance, that it was with ſome diſficulty I recollected her. She is free from every complaint, and her ſtrength and fleſh are perfectly reſtored. Pulſe 64. She has not taken any Digitalis for this month paſt.

Case VII. *Mr. Hollick*, of Stratford, aged 22, labours under a frequent and very troubleſome cough, attended with an expectoration evidently purulent, and amounting to about a tea-cup full in twenty-four hours. Pulſe near 100; great emaciation; much debility; colliquative perſpirations towards morning; complains of pain and uneaſineſs in the cheſt, but not of much difficulty of breathing, except upon motion; little thirſt; tongue clean; appetite much impaired; ſkin hot; body regular; urine natural; ſleep diſturbed; frequent ſhivering fits: Theſe ſymptoms acquired their preſent alarming growth in about three months.

My

My advice was requeſted on July 25, 1800, when I ordered him ten drops of the ſaturated tincture of Digitalis night and morning; at firſt in an infuſion of quaſſia, afterwards in an ounce and a half of the decoction of cinchona with two drachms of the tincture of orange-peel, and occaſionally with the addition of a few drops of the nitric acid, and a ſlight opiate at bed time. The following dates denote the days on which I viſited him, between which his ſurgeon ſaw him daily, and paid him the moſt marked attention; to this gentleman, indeed, I am particularly indebted for the ſkillful manner in which, during my abſence, he increaſed or diminiſhed the quantity of the Digitalis, according to circumſtances.

Auguſt 2, 1800. Doſe of Digitalis increaſed to forty drops per day. Pulſe 48, ſoft and ſteady; ſkin cooler; cough not ſo troubleſome; in other reſpects as before. He has no affection of the ſtomach or head. Ordered to live generouſly, to take a few glaſſes of Port wine after dinner, and to take gentle exerciſe every day on horſeback.

Auguſt 9th. Digitalis increaſed to fifty-four drops daily; the pulſe has riſen, beating 60, ſoft, and with occaſional intermiſſion; no naufea or giddineſs; expectoration rather decreaſed; cough much leſs; ſkin perfectly cool; perſpirations trifling; appetite improved.

Auguſt 16th. Digitalis increaſed to ſixty drops; pulſe 68, and ſlightly intermitting; expectoration diminiſhed; very little cough; appetite good; ſleep undiſturbed; perſpirations removed; takes ſix glaſſes of Port wine and a bottle of cyder daily, and rides out every afternoon two miles on horſeback.

23d. Doſe of Digitalis per day ſixty drops; pulſe 70; expectoration increaſed again to a tea-cup full, and very purulent; appetite continues good; no naufea or giddineſs; takes ten glaſſes of wine daily; no perſpirations, and not much cough. Ordered the tincture of Digitalis to be increaſed.

30th. Doſe of Digitalis ſeventy-two drops; pulſe 60, and intermitting; expectoration again diminiſhing; ſtrength not decreaſed; takes a bottle of Port wine per day, and rides out as uſual.

September 6th. Doſe of Digitalis ſeventy-ſix drops; pulſe 58, intermitting; expectoration ſtill continues purulent, and with regard to quantity ſtationary; appetite good; ſkin perfectly cool, though taking better than a bottle of wine daily; complains of pain in his ſide, which appears to be merely muſcular. Ordered a volatile liniment to be applied to the pained part.

13th. Doſe of Digitalis 80 drops; pulſe 54; expectoration much diminiſhed; cough nearly gone; pain of the ſide removed;

moved; feels himſelf ſtronger; breathing eaſy; ſkin cool; continues his wine; appetite as uſual.

20th. Doſe of Digitalis as before; pulſe 56; expectoration nearly removed, and no longer purulent; cough gone; takes a bottle and a half of Port wine per day; ſkin cool; complains of ſinking and languor, which are relieved by taking wine frequently; requeſted to do ſo whenever theſe ſenſations recur; ſtrength improving, and rides out much further without fatigue; has five drops of tinctura opii in each draught.

October 9th. Since September 20th, his pulſe has riſen to more than 70; and his expectoration returning, the tincture was again increaſed, the doſe being now 88 drops; pulſe 48, and intermitting; expectoration about a table ſpoonful; has gained ſince my laſt viſit ſome fleſh, and his ſtrength is greater; but now complains of a ſenſation of twiſting in his bowels after each doſe of his medicine, and of much ſinking at the pit of his ſtomach; takes two bottles of Port wine per day; ſkin cool; his head not in the leaſt affected by the wine; appetite good; body regular; no perſpirations; no pain; no cough; no naufea; no giddineſs; rides out as uſual.

October 23d. Doſe of Digitalis eighty-eight drops per day; pulſe 58 and regular when laid upon his couch, but much accelerated upon motion; no cough; breathing perfectly eaſy; expectoration not a table ſpoonful, and little if at all purulent; uneaſy ſenſation in his bowels removed; no perſpirations; appetite not quite ſo good as on October 9th; took yeſterday near three bottles of Port wine; ſtrength and appearance as at the laſt viſit; body regular; ſkin cool; ſpirits very good; no naufea; no giddineſs. Ordered to continue the Digitalis, and to take a little nitric acid in each draught.

November 3d. Since Oct. 23 his pulſe has ſunk to 36, and the intermiſſion being alarming, the Digitalis was omitted for two days, and then reſumed at the rate of twenty drops morning and evening; the doſe is now ſixty drops per day, viz. thirty morning and evening; pulſe 64, ſoft and regular when laid upon his couch, but intermitting, though not accelerated, upon motion. On the reduction of the Digitalis no neceſſity was found for the quantity of wine he had been accuſtomed to; he now takes only one bottle per day. He experienced no ſickneſs even under the great depreſſion above mentioned. Expectoration about a table ſpoonful; ſtrength and appearance as on Oct. 23; ſkin cool; ſpirits good. Ordered to continue the Digitalis.

This very inſtructive caſe, whoſe termination I muſt now leave open, but which ſhall be communicated in a future Number, proves what a conſiderable degree of ſtimulus may be borne

borne with safety and utility, when the system is under the full influence of the Digitalis. Not only whilst taking two bottles of wine per day was the pulse unaltered, and beating but between 50 and 60 strokes in the minute, but the skin also remained perfectly cool, nor was he at any time flushed, nor was his head in the least affected.

Before he commenced the use of the Fox-glove a single glass of wine flushed him, and his appetite was nearly gone; his cough was violent; his expectoration considerable; his night sweats profuse; his pulse quick; the uneasiness in his chest much, and his sleep greatly disturbed.

He is now, November, 1800, free from fever; his pulse being now, and having been for near three months, upon the average, but 60 in the minute; his appetite is good, and two bottles of wine per day neither heat him nor affect his head; his cough is gone; his purulent expectoration a mere trifle; his breathing easy; his perspirations completely removed; his sleep sound; and he has neither pain, sickness, nor giddiness; he rides out every day; and his spirits are, and have been, whilst taking the medicine, perfectly good and equal.

Notwithstanding, however, this favourable change, some symptoms, indicative of danger, remain; his expectoration, though greatly diminished, still continues; he gains little flesh, and there is much debility; and frequently much acceleration of his pulse on motion. In this state of the disease, I do not choose to commit myself by presuming to predict the event.

Case VIII. *Mr. Smith*, of Semer, aged 50. September, 1799, has a very copious purulent expectoration, a violent cough, and profuse colliquative perspirations; strength so much diminished as to be confined to his bed; pulse 100. He has been ill better than two months, and has lost two sisters and a brother by the complaint: he has taken the tincture of Digitalis, under the care of his surgeon, Mr. Growse, of Bildeston, and reached ninety drops per day, forty-five morning and evening, when his pulse had sunk from 100 to 50 strokes in the minute, without any consequent giddiness, and with very little nausea. He continued the Digitalis for three weeks, during the latter part of which, his expectoration, Mr. Growse informs me, was much decreased, and his cough greatly better; his perspirations were less copious, and he acquired so much strength, as to get down stairs and take some exercise: at this period he left off the medicine, complaining greatly of the languor it produced. In four weeks after, however, his former symptoms returned; and when I first saw him, he had resumed the tincture by Mr. Growse's direction, which I ordered to be increased

increaſed gradually, until the pulſe ſhould again drop to 50 in the minute, and to be kept at that ſtandard for ſome weeks; it was taken in an infuſion of quaſſia, along with ſome tincture of myrrh.

By the commencement of October, 1799, the pulſe was again reduced to 50, accompanied by much languor and ſenſe of faintneſs, but with no vomiting or giddineſs; the appetite was improved, the circulation had no intermiſſion, the expectoration too was much diminiſhed, and the cough leſs frequent.

In this ſtate he refuſed any longer to continue the medicine, notwithſtanding our repeated and earneſt ſolicitations, affirming he would rather die than endure again the languor he had experienced: I viſited him thrice, ſolely with the view of inducing him to perſevere, but in vain. What would have been the reſult, had he ſubmitted to our wiſhes, I cannot pretend to ſay; it is probable it might have been unfavourable; but, as independent of the Digitalis, he had no chance of recovery, and though exciting unpleaſant feelings, it had been productive of no dangerous ſymptoms, but had already, on the contrary, exerted a decided ſalutary power; I thought it my duty to urge a longer trial. He lived, I believe, three or four months after relinquiſhing the Fox-glove.

I have been the more particular in this caſe, as it affords a ſtrong example of what obſtacles ſometimes oppoſe the exhibition of this medicine. There is no arguing againſt ſenſation; and it were much to be wiſhed, that either ſome corrective were diſcovered, or ſome ſubſtitute of equal power over the heart and arteries, yet ſtript of the tendency to affect the head and ſtomach. I have reaſon to believe, however, from the caſe of Mr. Hollick, that by exhibiting the tincture of Digitalis in the moſt gradual manner, ſo as to habituate the ſyſtem to its action, theſe troubleſome conſequences may be altogether ſuperſeded, and the circulation, notwithſtanding, brought fully under its influence. The caſes too of Marris, Grimes, and Ames, are in confirmation of this idea.

Case IX. *Mrs. Green*, of Hadleigh, aged 20, was attacked many months ago with violent cough, great difficulty of breathing, and ſlight mucous expectoration; ſhe had alſo colliquative perſpirations, and morning and evening exacerbations. Theſe ſymptoms were checked, and for a time altogether ſuſpended, by the progreſs of pregnancy; but in a week after ſhe was brought to bed they re-appeared with double violence, and the expectoration became loaded with pus. Two of her ſiſters died of pulmonary conſumption.

I saw her on September 25, 1799, when she had been taking for some time fifty drops per day of the saturated tincture of Digitalis, under the direction of Mr. Bunn, and her pulse, which had been previous to the use of the Fox-glove 112, now beat but 80 strokes in the minute; her cough, difficulty of breathing, and perspirations are better; the expectoration, however, still continues copious, and very purulent.

I requested the Digitalis might be gradually increased, and taken thrice a day; this was done, first in a preparation of cinchona and vitriolic acid, afterwards, when sickness took place, in lemon juice, which enabled her to retain the drops on her stomach. The largest quantity she could ever take of the tincture amounted to sixty-six drops per day, divided into three doses, at which time her pulse dropped to 60, and for a short period the greater part of her symptoms, even the expectoration, vanished, and I entertained some hope of a salutary result. This amendment was, however, but transient, for, by the 16th of October, the symptoms returned with accelerated force, and she died before the expiration of the month.

Case X. *Mrs. Holton*, of Nayland. Of this case I have preserved no memoranda, having only seen her once, and when she was in the last stage of phthisis. She had taken, however, the tincture of Digitalis under the eye of Mr. Harrold, a very intelligent practitioner of the place. Only transient benefit had been received from it; and when my advice was requested, on December 26, 1799, she was in a state of very great debility. I ordered her the powder of Digitalis in pills, with a small quantity of opium purificatum, but little or no relief, I believe, was obtained. She died, if I recollect aright, about two months after I saw her.

Case XI. *Mr. Green*, of Boxford, applied to me on the 9th of June, 1800. He is of a consumpitve family, and has been for some time affected with every symptom of tubercular phthisis. His expectoration I have had no opportunity of inspecting. I requested Mr. Growse, his surgeon, and near relation, would try the effects of the saturated tincture of Digitalis; and, on June 18th, when I last saw him, the medicine had agreed well, and I thought him better. I have taken no notes of this case, neither am I at present acquainted with the result.

Of these eleven cases, four were instances of incipient phthisis, and were cured; indeed I have much reason to think, not only from my own experience, but from that of others detailed

tailed in this Journal, that ſimilar ſucceſs will attend five cases out of ſeven where ulceration has not occurred, and where the medicine has been early and ſkilfully exhibited.

Of the remaining ſeven caſes, ſix were certainly in the purulent ſtage; and of theſe, two were cured, and a third, viz. Mr. Hollick's caſe, remains undecided.

For the ſake of perſpicuity, and with a view of throwing the whole upon the eye at once, I ſhall give, in a tabular form, an arrangement of all the caſes of pulmonary conſumption in which I have attempted a cure through the medium of the Digitalis, ſtating the name, the ſtage, and the reſult.

NAMES.	STAGE.	RESULT.
Marris, Mr.	Purulent.	Recovered.
Grimes, Mr.	Purulent.	Recovered.
Ames, Mr.*	Purulent.	Recovered.
Howlett Martha,	Incipient.	Recovered.
Bridgman, Miſs	Incipient.	Recovered.
Hammond Sarah,	Incipient.	Recovered.
Buſh Anne.	Purulent.	Recovered.
Salmon, Mrs.	Incipient.	Recovered.
Hart Anne,	Purulent.	Recovered.
Hollick Mr.	Purulent.	Undetermined.
Whitmore, Mr. †	Purulent.	Died.
Boutell, Mr.	Purulent.	Died.
Smith, Mr.	Purulent.	Died.
Green Mrs.	Purulent.	Died.
Holton, Mrs.	Purulent.	Died.
Green, Mr.		

From this table it will be immediately perceived, that out of ſixteen caſes of pulmonary conſumption, ſuppoſing Mr. Green's to have terminated unfavourably, nine have recovered, and one very important caſe remains yet undecided.

In thus ſtating hitherto the whole of my practice with the Digitalis in conſumption, I have taken much pains that every circumſtance ſhould be very faithfully recorded; with the view therefore of procuring greater accuracy, theſe caſes have been read over to moſt of the medical gentlemen who attended with me,

* The name of the patient whoſe hiſtory is given as Caſe III. Numb. VIII. p. 268.

† The name of the patient whoſe hiſtory is given as Caſe II. Numb. VIII. p. 267.

me, that any neceſſary particular which had eſcaped my minutes might obtain introduction.

It may be neceſſary, however, before I conclude this paper, and with the idea of obviating any captious query, to ſtate, that I have been ſent for to ſix patients who were literally dying, with a view of exhibiting the Digitalis! To two of theſe, who were actually in articulo mortis, I refuſed, though preſſed, to give one drop of the tincture; they both died, I believe, within forty-eight hours after my viſit. The third, Mrs. Iſaacs, of Witham, took about fourteen drops previous to her death, and, as might be expected, without any perceptible effect; ſhe died four days after I ſaw her. The fourth, Mrs. Hooker, of Boxted, took alſo a ſmall quantity of the tincture, but her debility being too great to bear its action, it was immediately given up; ſhe died about a week after it was relinquiſhed, and ten or eleven days after I ſaw her. The fifth, Joſeph Brett, apparently in a dying ſtate, began the tincture, but it was almoſt immediately withdrawn from its affecting his head; he died about ten days after I ſaw him. The ſixth, Mrs. Hird, near Manningtree, in the very laſt ſtage of the complaint, under which ſhe had laboured for near two years, attempted to take a ſmall quantity of the tincture, but her ſtomach could not bear it; ſhe died a few weeks after.

I ſhall now offer a few obſervations cloſely connected with the ſubject of this paper.

The power of diſtinguiſhing accurately between pus and animal mucus, has long been, and ſtill is, perhaps, a deſideratum. The following paſſage from Mr. Everard Home's Diſſertation on the Properties of Pus, preſents, however, a curious, and, apparently, a deciſive mode of aſcertaining this diſtinction: "The property," obſerves he, "which characteriſes pus, and diſtinguiſhes it from moſt other ſubſtances, is, its being compoſed of globules, (viſible when viewed through the microſcope.) Mr. Hunter was, I believe, the firſt who took notice of this property; and has thereby furniſhed us with a very accurate diſtinction between pus and animal mucus. For the appearance of what is properly termed mucus, that is, animal ſubſtance diſſolved from putrefaction, is flaky, and very different in its appearance from pus. It is alſo by this property diſtinguiſhed from all the chemical combinations of animal ſubſtance that I am acquainted with, every one of which appear in the microſcope to be made up of flakes."*

I have

* On the Properties of Pus, pages 36 and 37.

I have noticed, in Numb. X. p. 417, of this Journal, the vaſt utility of the Digitalis in catarrh, vomica, and hæmoptoe; in this laſt dangerous diſeaſe I have never ſeen it fail. The following caſe, the lateſt which has occurred to me, is ſo ſtrikingly illuſtrative of the ſalutary effects of the Fox-glove in active hæmorrhage, that I ſhall make no apology for introducing it.

Mr. Ennalls, aged 27, and of a ſtrong robuſt habit, having by violent muſcular exertion ruptured a blood veſſel in his lungs, diſcharged, by coughing, nearly one pint of blood in twenty-four hours; his pulſe 120, firm and hard. He has taken the ſaturated tincture of Digitalis, by the advice of his ſurgeon, Mr. Growſe, of Bildeſton, twice and thrice a day; and, when the doſe amounted to ninety drops in twenty-four hours, the pulſe was reduced to 50, and the hæmorrhage entirely ſubſided.

In conſequence, however, of incautious exertion too ſoon after his recovery, the hæmorrhage returned with more violence than at firſt, and on May 2, 1800, my attendance was requeſted. He had bled profuſely; the diſcharge, however, had been ſomewhat checked by the reſumption of the Digitalis; his pulſe notwithſtanding beat 124 ſtrokes in the minute; the heat was great, the breathing difficult, and ſo much irritability was preſent, that the hæmorrhage recurred upon any the leaſt effort either of mind or body.

I ordered the tincture of Digitalis to be increaſed in as rapid a manner as was conſiſtent with ſafety, and until the pulſe ſhould again drop to 50; I likewiſe preſcribed a drachm of the nitric acid in a pint of water daily, and a regimen of the cooleſt kind to be ſtrictly obſerved, along with perfect reſt.

The pulſe in a few days, I underſtand from Mr. Growſe, was reduced to 48, and on May 13, when I ſaw him again, the hæmorrhage had compleatly ſubſided; the heat was natural, the breathing eaſy, and nearly every morbid ſymptom removed. Pulſe between 50 and 60, for the doſe of Digitalis had been lately decreaſed by Mr. G. Ordered to continue the tincture, but in reduced doſes.

Some weeks after this he had another ſlight attack, which was ſpeedily removed by again having recourſe to the Digitalis. He is now, September 1800, in perfect health.

I have had occaſion to mention, in a previous page, that an auxiliary to, or ſubſtitute for, the Digitalis, poſſeſſing its active ſalutary powers, yet with a minor portion of deleterious energy, would be an acquiſition of the firſt importance. May not ſuch a medicine be found in the *Rhododendron Chryſanthemum* of Linnæus? This ſhrub grows on the ſummits of the high mountains named Sajanes, in the vicinity of the river Jeniſca,

in

in Siberia, where, in a weak infusion, it is used for tea. A parcel of it was sent, some years ago, to Edinburgh, and warmly recommended as a cure for rheumatism. Dr. Home, in his "Clynical Experiments, Histories and Dissections," has given us a report relative to its effects in this complaint; it failed in alleviating the rheumatic symptoms, but in every instance exhibited a remarkable sedative effect on the heart and arteries. In three cases recorded at length, it reduced the pulse from 112 to 82, from 106 to 44, and from 96 to 66. An infusion of from half a drachm to three drachms was given for a dose; it usually produced slight giddiness; sometimes nausea, and an inclination to sleep. Dr. Home thus gives us his opinion of this active plant.

"It appears to be one of the most powerful sedatives which we have, as in most of the trials it made the pulse so remarkably slow, and in one reduced it 38 beats. By sedatives I mean such medicines as make the pulse slower, though not weaker. Such have not been much attended to by physicians; and, in most experiments, if the pulse was not quickened, the experimenter declared they had no effect on the pulse; never suspecting that there was a numerous class of bodies which rendered it slower, and had as powerful effects on the system as the former. This has been the cause of many false conclusions. I have attended much to this class of sedatives, have found it very extensive, and possessing, in common, many effects on the healthful and morbid body. Such medicines appear to be useful in a number of diseases, as they diminish the sensibility of the nervous system."*

It is very probable that, among the different species of Digitalis, there may be found some which shall act in a much milder manner than the *purpurea*, and yet be equally efficacious. According to the latest arrangement, these species are as follow: viz. 1. Digitalis purpurea; 2. Digitalis minor; 3. Digitalis thapsi; 4. Digitalis lutea; 5. Digitalis ambigua; 6. Digitalis ferruginea; 7. Digitalis obscura; 8. Digitalis canariensis; 9. Digitalis sceptrum; 10. Digitalis orientalis; 11. Digitalis cochinchinensis; 12. Digitalis sinensis.†

When the name and first description of this plant were given by *Fuschius*, only two species were known, the *purpurea* and the *lutea*,‡ and even of these the latter is but little attended to at

* Home's Clynical Experiments, third Edition, p. 149.

† Vide Professor Martyn's Edition of Miller.

‡ Duum est generum, una enim purpureos obtinet flores, ideoque Digitalem purpuream appellavimus. Altera luteos habet flores, ob id Digitalis lutea dicta nobis est.

at preſent, though growing in moſt parts of Europe. It was cultivated by Gerarde in 1596. In the Memoirs, however, of the Royal Academy of Berlin, volume for 1794 and 1795, a manuſcript diſſertation by Dr. Careno of Vienna, is announced by M. Mayer, which treats of the efficacy of the *Digitalis lutea* in dropſy. We are told that Dr. Careno has found that this ſpecies of the plant poſſeſſes a ſtronger diuretic power than the *Digitalis purpurea, without any of its noxious effects*; and that he has ſucceeded in curing dropſical patients with Digitalis lutea, after the moſt powerful diuretics had failed.

A poſſibility here offers itſelf of diſcovering the ſedative powers of the Digitalis, detached, in a great meaſure, from the noxious principle accompanying the ſpecies purpurea.

I have thus, Gentlemen, as far as at preſent lies in my power, attempted, from my own experience, to aſcertain the value of this active agent in conſumption; and if I may be allowed, in this ſtage of the enquiry, to form an inference from the practice, it would be, that in the Digitalis we have diſcovered a powerful and generally ſucceſsful barrier againſt the ravages of this deſtructive diſeaſe; and that, of courſe, it will ultimately prove, if reſorted to in due time, one of the greateſt bleſſings which medicine has conferred upon mankind.

To have contributed ſomething toward mitigating the evils of humanity, is to have opened a ſource of the pureſt individual pleaſure; and though in carrying my wiſhes into execution, I may be occaſionally injured by the ſpirit of uncandid controverſy, yet ſhall the temporary uneaſineſs of wounded feeling weigh little in the ſcale; for, in whatever ſituation I may be in future placed, whether in ſickneſs, in poverty, or in priſon, I will call to mind the exertions I have now made, and be content.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

HAVING been favoured with the inſertion of my laſt letter relative to the uſe of flos cereviſiæ in Typhus, I beg leave to ſubmit the following pages to your conſideration; if you think them worthy of notice, they are at your diſpoſal.

Accounts of caſes, when faithfully related, are nearly as ſatisfactory, whether the treatment has been ſucceſsful or not, as, in the one inſtance, the public have a remedy before them, or otherwiſe a ſtimulus to diſcovery is excited by the failure of

adopted

adopted remedies. The ſubject on which I ſhall ſolicit your attention is, the uſe of yeaſt, and recital of a method which has been projected to obtain it with greater purity; a plan attended with the greateſt national advantages, when you peruſe the Bills of Mortality, and reflect how many die annually of putrid diſorders. Among the lower claſſes of people the ravages of this diſeaſe are peculiarly afflicting, as their poverty prevents them from obtaining bark, red wine, &c. which are uſually the medicines made uſe of. This important ſubject has long been diſcuſſed through the medium of your excellent Journal; it has found in men of talents, patronage as well as perſecution;* the grand deſideratum is yet undetermined, (and may remain ſo a long time) whether it really poſſeſſes the powers aſcribed to it. I truſt, to the calm enquirer, ſatisfactory anſwers may be found, both in my letters and in thoſe of various others; for few, comparatively, have examined its merits; having, as they imagine, a ſufficient remedy. Though thouſands die annually, they paſs unnoticed any new ſuggeſtion, and conceive, probably from the ſimplicity of the ſubject, it is altogether unworthy attention. As many have complained of the diſagreeableneſs of taking yeaſt in its original ſtate, I was induced to conſider of a method by which the quantity might be leſſened without injuring its mode of action, and accordingly determined to filtrate a certain quantity, and take an exact account of what was loſt by the proceſs; accordingly, having obtained a quota of freſh ſmall-beer yeaſt, I proceeded as follows, viz.

A cup which I made uſe of, previous to being filled, weighed 2 oz. 6 dr. $\frac{1}{2}$; the cup full of yeaſt weighed 8 oz. 5 dr. ſo that the yeaſt at firſt, that is, before filtration, weighed 5 oz. 6 dr. $\frac{1}{2}$. I filtered it through common filtering paper, ſuch as is tied round pill boxes, and let it remain twenty-four hours, at which time the beer had completely ſeparated, leaving a thick extract; and on weighing them, I found them as follows, viz.

Beer drawn away, weighed 1 oz. 1 dr.

Yeaſt, 3 oz. $\frac{1}{2}$.

So I found I loſt better than an ounce, probably by the paper having imbibed a large quantity, as well as allowing for ſome that might not be taken off. This I do not conſider a ſtandard, as there may be much difference occaſioned by the time the yeaſt has remained after being taken from beer, and as it is occaſionally adulterated by mixing beer with it, in order to increaſe the value for ſale. Having proceeded thus far, my next plan was to try whether the quantity being ſmall or large

* See Mr. Cuſtance's Letter, publiſhed in No. XVII. for July, 1800.

large that was ſet apart, occaſioned any difference, and whether that quantity was beſt ſpread or otherwiſe. Into a four-ounce gallipot, I put on the 14th of October, 1800, two ounces of the pure extract, and ſet it in a dry ſituation; into a two-ounce gallipot I put half an ounce, and ſpread it round the ſides, ſo as to cover the whole of the inſide, thereby expoſing a much larger ſurface; and this I alſo laid in a very dry ſituation, namely, a cloſet by the fire: Into another two-ounce gallipot I put half an ounce, and laid it at the bottom in a lump; this, as well as the reſt, was carefully tied over with bladder and paper; but the latter I put in the dampeſt part of the cellar: Into a ſmall ſaucer I put half an ounce, and ſpread over the ſides; this was covered over and ſet near the fire, to bring it to a conſiſtence capable of pulverization. Thus far I proceeded on the 14th of October. On the 20th I examined the latter, and found it dried perfectly hard, of a nut brown colour, and ſtrong ſmell; and having procured half a pint of wort, juſt brewed, I heated it to the degree of 70, by the thermometer; and having previouſly mixed half a ſcruple of the powder with an ounce of the wort, and let them ſtand at a ſmall diſtance from the fire for an hour, I mixed them together: The half ounce of yeaſt that I ſet apart for drying, I omitted to mention, weighed before pulverization only twenty-three grains; thus loſing, by a ſecond evaporation, two hundred and ſeventeen grains from two hundred and forty.

On the next morning I examined the wort that had been mixed with the powder, but found the fermentation proceeded exceedingly ſlow, nor could I obtain from the proceſs any freſh yeaſt; I repeated my former experiment with the powder on October the 26th, but then found not the leaſt fermentation produced. Thinking another mode might be adopted that would better anſwer my expectations, I put a pint of water into a kettle, and having heated it to 75 of the thermometer, an ounce and a half of treacle was then put to it, which reduced it about five or ſix degrees; and having mixed a ſmall quantity of the liquor with the remaining powder, (about thirteen grains) I put them together, and after waiting ſome hours in anxious expectation, I confeſs I was much diſappointed by the reſult, when, on examination, I found it exactly as when mixed.

This experiment, however, has convinced me, that the gas is entirely diſſipated by being expoſed to heat; but a variety of reaſons induced me to try it: for, in the firſt place, the doſe of yeaſt in ſubſtance, and not freed from the beer, is about a large ſpoonful; and as the powder would have been given in much leſs compaſs, it might have been adminiſtered with

greater pleaſure to the patient, and certainty to the practitioner than in its original ſtate; and ſecondly, had the fermenting properties of yeaſt been retained in the ſmall compaſs of a powder, and poſſeſſing powers equally efficacious, the diſcovery would have been highly advantageous to the public; for yeaſt being ſometimes at a moſt exorbitant price, and frequently not to be obtained for any, brewers as well as others, would have been enabled to keep by them a large ſtock, and the public obtain it at an eaſy rate. I have been very particular in informing you the exact method I adopted in placing it, both in damp and dry ſituations; for in one, I ſpread it round the inſide of the pot, and in the other, I laid it in a lump. It would be treſpaſſing on your time, to be ſcrupulouſly preciſe in enumerating the various proceſſes that were afterwards made uſe of; but I am happy to ſay, I found the intention anſwer with little variation as to the place where they had been depoſited, and I produced a copious fermentation from all the others at the different periods of a week, fortnight, and month, and till all was conſumed. I think, from this narrative, it will plainly appear, that very great advantage is derived from filtration, as at leaſt it enables the practitioner to preſcribe with a greater degree of certainty, and the quantity loſt by this plan, is known by referring to the former part of my letter. I was indebted for my knowledge of a preſs, to the ingenious Mr. Packer, of London, which is, a "*frame made very ſtrong, and boards put inſide, with grooves, and wound acroſs the contrary way with ſtring, in order to prevent a flannel bag, which is made the ſize of the preſs, and put inſide it, filled with yeaſt, from getting into the grooves; by this means, an aperture is left for the beer to eſcape.*" According to Mr. P's account, about "*two-fifths beer is drawn away.*"

I have now cloſed the detail of my experiments with yeaſt. Some accounts of its unrivalled excellence in Typhus, have appeared in different Numbers of your inſtructive Journal, the authors of which, I believe, with the exception of one gentleman, have impartially confeſſed the beneficial effects. I have myſelf tried it in various inſtances, all of which recovered, though with appearances of rapid diſſolution. The teſtimony of one might be conſidered as the effect, perhaps, of bigotry, or want of general information; but let the prejudiced mind peruſe the ingenious letters of Dr. Lewin, of Liverpool, in No. IX. and Mr. Brown, of Hatton Garden, in No. XVI. The Doctor poſitively aſſerts, what I have ſo ſtrenuouſly defended in oppoſition to the accuſation of its enemies, "*that it does not affect the bowels;*" for I have tried it repeatedly, and always found it poſſeſſed of a contrary effect. Its uſe is not more

more vehemently condemned even in this age of philoſophy? than it was in March, 1683, when the Faculty of Medicine at Paris, ſolemnly maintained it noxious to the health of individuals; and though the bigotry of ignorant enthuſiaſts at that time was inſufficient to aboliſh its uſe, yet men of acknowledged abilities condemn, partly from intereſt, partly from want of correct information, a medicine which they never made uſe of, or if they did, never attended to. When prejudice obſcures our reſearches, and mankind ſee through a falſe medium, can it be expected but condemnation muſt enſue? It is ſuch conduct that fetters inſtruction, and prevents the foſtering hand of diſcovery from imparting its genial aid. As an auxiliary to the plan of treatment ſpecified, I would recommend the uſe of the following for common drink, eſpecially as large draughts of water are beneficial.

Take two glaſſes of equal ſize, or two pint pots, and having filled one with water, hold it over beer, while working and nearly fit to be tunned, and gently pour it from one glaſs or pot into the other, for the ſpace of an hour, and this will be found highly impregnated with fixed air; and as the latter poſſeſſes ſuch a decided ſuperiority in putrefactive tendency, this impregnated water muſt, at leaſt, be equally ſerviceable.

It is obſerved by Dr. Shebbeare, in his Theory and Practice of Phyſic, that fixed air has been very advantageouſly adminiſtered againſt putrid diſorders in glyſters; and he alſo recommends the uſe of water impregnated with gas, as an antiputreſcent.

Thus far, Gentlemen, I have ſtated the reſult of my reſearches: I have ſcrutinized its various modes of action as circumſpectly as thoſe who condemn, and what is here expreſſed may be depended on. Convinced it will eventually remove the cloud of prejudice that has hitherto obſcured its glory, I leave the deciſion to time and inveſtigation, conſcious that he who employs ſome portion of his time in examining it with candour, will ultimately be repaid with ten-fold gratification.

I have the honour to be,

GENTLEMEN,

Your humble ſervant,

Winſlow, Nov. 7, 1800. I. H. GROSE.

P. S. I ſhall take an opportunity, ſome future day, to inform you of any additional diſcovery.

Dr. Marshall, on the Cow-Pox.

Copy of a letter from Dr. MARSHALL to Mr. RING, dated Mahon, Iſland of Minorca, September 1800.

MY DEAR SIR,

IN my letter from Gibraltar, I informed you of our intention to proceed to this place. We arrived here upon the 7th inſt. and have been buſily employed amongſt the Navy and Army, who are both equally anxious to avail themſelves of the excellent diſcovery of our friend JENNER. The inhabitants here, from the great dread they entertained of the Small-pox, were cautious reſpecting the Cow-pox; but were ſo convinced of its innocency, from our arguments, as to permit us to inoculate ſome of the infants in the Foundling Hoſpital. From its mild effects upon them, we have now been ſolicited to extend the practice to their own children; and if it becomes general, as it probably will, we ſhall be detained here a few weeks longer.—From hence we intend proceeding to Palermo, Malta, or Naples, as a conveyance may offer; and I have to beg the favour of you to ſend me ſome Cow-pock virus to Naples and Palermo.

I am ſorry that the great haſte in which I am obliged to cloſe my letter, prevents the poſſibility of my adding more, than that the Cow-pox, in every inſtance, preſerves its characteriſtic mildneſs. I remain, &c.

J. H. MARSHALL.

Copy of a letter from Dr. MARSHALL to Mr. RING, dated H. M. S. Foudroyant, Gibraltar Bay, Oct. 16, 1800.

DEAR SIR,

YOU, no doubt, will be ſurpriſed at receiving a letter from me, dated Gibraltar, ſo ſpeedily after the one I did myſelf the pleaſure of writing to you from Mahon; but as, upon our arrival there, we were too late to join Lord Keith, he having ſailed the week previous, I determined to embrace an opportunity that offered of joining him, which I did yeſterday.

He has received me with great politeneſs, and not only permitted but recommended the inoculating of the Fleet for the Cow-pox; and I this day commence. I am now, and ſhall continue, on board his ſhip, till an opportunity occurs of going up to Palermo or Naples, which, I underſtand, will be in a very ſhort time.

I am

I am happy to inform you, that the Cow-pox is in full practice here amongſt the inhabitants, and has preſerved all its uſual mild characteriſtics in every inſtance. It was with great pleaſure as well as ſurpriſe, that my former friends received me again; and the gratitude they expreſs to our friend Jenner, for the benefit they experience from his great diſcovery, muſt be gratifying to all his friends. Dr. Walker I left buſy at Minorca; from whence he will proceed up to Malta, and we ſhall join again at Palermo.

I muſt beg a frequent ſupply from you of the virus, as I wiſh to try as many experiments as I can upon the activity of it, at different ages. I am ſorry to inform you, that what I procured from you, and put up ſo carefully, is now grown inactive; however, that is now four months old.

The troops that are here in the expedition, are falling down very faſt in the ſcurvy; and are in general ſickly. At Cadiz they have had a dreadful diſorder; which, ſo far as I can make out from the report of the phyſician who was ſent there from Madrid, and which I have ſeen, has every character of the yellow fever, attended with bilious vomiting, great proſtration of ſtrength, feeble pulſe, delirium, &c. and is highly infectious. Every precaution is uſed here, to prevent any communication with Spain; though I underſtand, that ſince the commencement of the rains, its violence has greatly abated.

I remain, &c.

J. H. MARSHALL.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

BE pleaſed to inſert, if you think proper, the following Caſes in your valuable periodical Journal. I am,

Your humble ſervant,

Percy Street, Nov. 21, 1800. ISAAC OLIPHANT.

Mrs. Oſborn, now aged 57, wife of Mr. Oſborn, breeches-maker, South-ſtreet, Manchеſter ſquare, nineteen years ago received a puſh on her right breaſt, and ſoon after a violent preſſure from an iron rail. Conſiderable pain was felt from the laſt, and a hardneſs left, with tenderneſs to the touch. In ſome ſhort time, there aroſe a puckering of the ſkin all around

around the hardneſs; in proceſs the furrows became exceſſive, all concentric to the induration, and compared by her to *binding strings.*

Inflammation ſupervened, all the breaſt appeared comprized in it; ſuppuration came on, and ſeparated the induration from its ſurrounding attachment to the breaſt. This proceſs was accompanied with cold ſhivering, ſickneſs, and vomiting, as happens ordinarily in ſuppuration and extenſive ſloughings. When the ſeparation was complete, the indurated portion came out, according to her term, like a cork, leaving a gaping hole.

After the expulſion of the diſeaſed portion, the puckering ſkin unfolded to paſs into the cavity; the ſkin crept in, becomcoming inverted. The ulcerated ſurface was very little ſenſible, but the breaſt was very ſuſceptible and tender. From the cavity, exceſſive hæmorrhage enſued, happening particularly in the night, ſo as to deluge the bed-cloaths, and reduced her to extreme weakneſs.

During the ulcerating proceſs a cup full of cliver-juice was drank every morning, when it could be had; and malt infuſion in the different ſtages of fermentation with yeaſt, made in a jar, to her victuals, and to an unlimited quantity.

The glands in the axilla were greatly enlarged during the proceſs of induration and ſeparation; and the band of communicating lymphatics was very ſenſibly increaſed. The arm was ſwelled, of a cumbrous weight, and rendered almoſt entirely uſeleſs.

Seven years ago I ſaw her; the communicating lymphatics between the breaſt and axilla were alone in a condition of ulcer; the breaſt was entirely abſorbed, and gone, but axillary ſwelling continued conſiderable.

She had for ſome time uſed an ointment of oil, wax, and roſin, (the ointment in common uſe with the pretenders to cure cancers) which I wiſhed her to continue, as well as her other plan. The ſwelling of the arm and in the axilla gradually leſſened and diſappeared, and the ſore by degrees healed, and has been well for five years paſt.

There was ſome reaſon to believe, that the change which took place in her breaſt was owing to ſupervening febrile affection occurring two or three times in the autumn, attended with cholera morbus to a dangerous degree; her breaſt was in its worſt ſtate at this time; and ſince its cure, ſhe has been free from ſuch attacks.

Mrs. Craib, of Tottenham-court-road, aged 46, has had three children, the laſt fifteen years ago; was never able to ſuckle with the left breaſt, but had no great inconvenience from this circumſtance. The menſes hitherto regular, till pleuriſy

ſeized

ſeized her; otherwiſe ſhe was extremely healthy, and conſtantly employed in an active life.

Two years ago ſhe got a violent bruiſe on the upper part of her left breaſt; the effects ſubſided as well as they uſually do in common caſes, only there was left ſome hardneſs with a little occaſional pain.

Six months after ſhe received another bruiſe on the ſame part, and all the conſequences of contuſion, ſwelling, livid colour, and pain, were greater than in the former accident; and the remaining pain was more ſevere, and the hardneſs of greater extent. In the recent ſtate, repeated applications of leeches were ordered; and when the active condition of the diſeaſe was ſuppoſed to be removed, ſome ſaponaceous camphorated embrocation was applied.

At this time the hardneſs was detached, and moveable from the general glandular ſtructure of the breaſt, when ſhe went under the care of a friend, not of the profeſſion, but who was a cloſe reader of medical books; he had culled from thence active applications, but of courſe applied them at random. The intention was to procure ſuppuration in the hardneſs, after means of diſcuſſion had failed; and one application was a poultice of pigeon's dung, that produced exceſſive burning and moſt excruciating pain; which, however, I believe, changed totally the diſeaſed condition, but increaſed its extent. It now reached over much more of the breaſt, and made the whole a conſolidated maſs of diſeaſe, and attended with an extended irritation to the axilla and other breaſt, wherein enlargements aroſe.

The next perſon under whoſe care Mrs. Craib fell, was a man who kept a chandler's ſhop in her neighbourhood, and had been a porter to a ſurgeon. He had the boldneſs to pronounce his new patient curable in ſix weeks, and that he would ſet about it. He began his courſe by ſprinkling it with a white powder, ſuppoſed burnt allum, which excited much pain, and covered the whole with a favourite ointment that he always carried away with him. This would not do, but he ſaid, it was only preparatory to ripen for the knife.

Mrs. Craib now got a recommendation to an eminent and experienced ſurgeon, who directly ſaw the marks of bad treatment in her breaſt, and expreſſed aſtoniſhment, hearing her caſe, that ſhe had not had regular aſſiſtance, and offered his ſervices of recommendation to a public inſtitution, which, however, ſhe declined accepting.

She was depreſſed with the proſpect before her, and tormented with ſhooting throbbing pains, particularly at the upper part of the breaſt, attended with an oozing, irritating ſanies, that excoriated as it extended. There was an ulceration below the nipple,

nipple, about the size of a shilling, and one above of about half the size, with jagged edges, covered at the bottom with a tomentous slough, of a yellowish colour. The skin surrounding the ulcers was level with the rest of the breast.

In addition to the above, when she first applied to me, the whole breast was a dark red consolidated tense mass, much like a large carbuncle, firmly fixed to the chest, and she had a swelling in the arm-pit the size of a pullet's egg; chronic inflammation had seized several cuticular glands around, particularly between the breasts, and most in the upper part. There was an adventitious hardness in the other, which she said, arose from the painful applications to the ulcerated one: I dare say it would have weighed three-fourths of a pound.

In some places there were interstitial suppurations; a round hole with matter on the surface that could not be wiped away, resembling sea-scurvy, as happens in habits who have ulcers, particularly in the legs; there are often such ulcerations of the skin, at different distances.

Her hands were affected with slight rhagades, and her left arm was considerably swelled; her pulse was quick, but, I believe, not too frequent; her health constitutionally unimpaired, and perfectly regular. She slept well without an anodyne; and, in short, had nothing to complain of but her ulcerated breast, and swelled weak arm, never feeling any affection from the other breast.

She put herself under my care the 8th of June last, and, to allay the irritation arising from improper applications and want of dressing, a sedative opiate solution was applied to the ulcerations, and I covered the whole breast with soap cerate: She was directed to take a dose, and repeat it occasionally, of magnesia vitriolata, and daily, three times a day, four ounces of the aqua mephitica alkalina, and to bleed the most tense part with leeches. This had the desired effect in removing the superinduced irritation; and, on a subsidence of the swelling, there was a sloughing, and stench from the sore: but I was obliged to change this application for the fermenting poultice, and this application was continued to the 18th, with the intended effect. The sore was as easy as such a diseased surface almost in any case could be supposed to be. The tenderness in the axilla was reduced; from not being able to bring her arm to her side, for some time past, nor lay on that side, she could nearly do both; the choppings were much lessened, and she felt herself able to attend constantly her shop, and had good nights rest. A favourable circumstance also was, that no bleeding attended on this ulceration; as the whole breast, and its vessels, appeared enveloped in such disease, that I should have had little reason

to

to expect their contracting to reſtrain hæmorrhage if it had occurred.

Having received a circular letter, in common with others in the profeſſion, from Dr. Niſbet, ſignifying he intended to confine his practice to the treatment of Cancer, Scrophula, and Phthiſis, I had the conſent of Mr. Craib to have his advice, on the 18th of June, and he preſcribed a grain of opium every night, a common drink of a ſmall portion of fixed vegetable alkali and ſulphur, diffuſed in water, and a ſulphurated opening electuary; the breaſt to be dreſſed with ſimple cerate; and he ſaid that it was a hopeleſs caſe, and that nothing could be done but palliation.

However, he wiſhed to give her an antimonial alterative pill, of his own preparation, which I admitted of, wiſhing to wave delicacy for the poſſible benefit of my patient; but ſhe only loſt ſtrength. Hopes of ſuppuration in the principal part of the diſeaſe were entertained, but it did not happen.

She ſoon was obliged to keep her bed-room, and ſpent much of her time in bed; indeed, working in her ſhop leſſened the proſpect of advantage from any treatment.

July 18th, in the evening, ſhe was taken with a ſevere rigor, and I gave an opiate, and a doſe of ipecac. in aq. ammon. acet. which brought on a profuſe ſweat; ſhe had three ſuch rigors in twenty days, which appeared to be owing to the putrefactive action of new-formed ſloughs, and which, at this time, exhaled ſuch a fœtor that Mr. Craib was obliged to part beds.

There was an ointment rubbed in, into the ſide of the ribs, ſimilar to the pill, ſubſtituting ſulphur for antimony, alſo of Dr. Niſbet's preparing. The applications were of my ſuggeſting, and thoſe I conceived the leaſt ſuſpicious of irritating, and diveſted of unctuoſity, which quality is ever hurtful to ſuch ulcers.

I was now ſorry that the plan had been purſued ſo long, as no advantage had been got by it, either in the diſeaſed appearance of the breaſt, or the ſores; the laſt were greatly enlarged, and the breaſt had leſſened in ſize in an equal proportion only to the general waſte in the body. She was now preſſed to go into the country as the only reſource, but as her journey was to be to Nottingham, ſhe wiſhed for ſtrength to bear ſuch fatigue.

On the 16th of Auguſt, in the evening, ſhe got out of bed to have it put to rights; thinking ſhe would ſhortly return to it, ſhe did not put on her ſtays; and in this ſtate remained longer up than ſhe at firſt intended, or thought herſelf able.

For want of her ſtays, as ſhe thought, and in my opinion rightly, a pain ſeized her under the right breaſt, which ſhe apprehended aroſe from flatulency, and drank ſome glaſſes of Ma-

deira wine to diſpel it; however, the pain increaſed, and I was called at five in the morning, when her pulſe could be hardly felt; ſhe was obliged to ſit up, was crying out continually with pain, at the ſame time preſſing forcibly on her ſide for eaſe.

I bled her to nine or ten ounces, and applied aq. ammon. pur. with a little oil, to excite a ſudden irritation, and ſave farther weakening by loſing of more blood, and gave a doſe of opium and ipecacuanha directly after.

However, the pain recurring from a fit of coughing, I was obliged to repeat the bleeding about four hours after the firſt, to about the ſame quantity, both of which were highly buffed and cupped. Her pulſe roſe, and I continued the opiate relaxant medicine with nitre and a little volatile alkali, and found, in the evening, ſigns of expectoration coming on, and which medicine now was conſidered competent for the treatment of this ſupervening diſeaſed affection.

At this time the breaſt was not an object of attention, only the ordinary dreſſing and cleanlineſs were attended to; and when it again became neceſſary to be examined into, the ulcer was changed into a common ſore, the breaſt ſhrunk, and conſiderably abſorbed; and in a ſhort time the whole was taken up as well as the ſwelling in the axilla, leaving for ſome little time after, a ſmall diſcharge from the moſt deep-ſeated ulceration, which alſo, in defiance of a ſtimulating application to keep up a diſcharge, cloſed.

Ever ſince her breath has been ſhort, and checked with cough, and glary expectoration; the pulſe, which before, I believe, never exceeded 80, was now upwards of 130, creeping and indiſtinct. She appeared exſanguinated, and very feeble; an iſſue was made in the oppoſite arm, but with no marked advantage.

On the 2d of October her oppreſſive breath in ſome degree increaſed, with teaſing cough, for which ſhe was ordered her former mixture, with the addition of the tincture of Digitalis, which moderated both; but from my enforcing the neceſſity of increaſing the expectoration, ſhe was afraid her medicine was mercurial, and did not purſue it properly.

Her breath and cough continuing troubleſome, on the 21ſt anaſarcous ſwelling of the face, ſtuffing, and fulneſs in the bowels, came on, with a ſcarcity of urine, ſometimes high coloured, and with copious ſediment; ſometimes the urina jumentoſa ſecreting not more than four or ſix ounces in twenty-four hours. In addition to her above mixture, ſhe took ʒiv. of the cream of tartar in an electuary, with ſome oil of aniſeed, daily.

On the 24th the urine was a little increaſed; and afraid of her

her naufeating the medicine, I compreſſed them into one doſe three times a day, or occaſionally, as,

℞. Pulv. Digital. gr. j. Cryſtal. tart. ʒij. Ipecac. gr. jß. Zinzib. gr. ij. Miſce.

Under this plan, the ſecretion of urine was increaſed; her pulſe, before hardly perceptible, became ſtronger; her cough leſs troubleſome; expectoration eaſier, and more free, amounting to near a pint of glary mucus, ſome a little yellow, in twenty-four hours.

On the ſubſidence of the continued irritation in her breaſt, and no appropriate ſuccedaneum being made, I introduced a ſeton into the ſide, ordering, over and above the powder, an infuſion of caſcarilla with parſley-ſeed, changed afterwards for quaſſia and carraway-ſeeds.

The pulſe being now 110, the ſecretion of urine plentiful, a little redneſs of health appeared again in the lips, and the pulmonic affection being the principal object, I give her the following pill three times a day, taking a doſe of cream of tartar occaſionally, with the infuſion, conſtantly three times a day.

℞. Pulv. Digital. gr. j. Ipecac. gr. jß. Ext. papav. alb. g. ß. Ol. anifi. g. jß. c. ſyrup. fiat pilula.

With this the breath was expanded, and a purulent expectoration enſued; notwithſtanding, much general relief was not felt till the 13th inſtant; in the night a moſt ſevere pain attacked the right temple, and over the eye, which, in the morning, terminated in an eryſipelatous ſwelling.

On the 15th the ſwelling increaſed, and blindneſs enſued; the breath and cough were much improved, from, probably, the diſeaſed irritation being determined to the face; this induced me to preſcribe patience only; and on the 18th it totally diſappeared, but with an evident aggravation of the complaint in the cheſt.

She now occaſionally drinks to her meals, malt infuſion in the different ſtages of fermentation, with yeaſt, in addition to her other plan.

In the reduced ſtate Mrs. Craib was in, when the pleuriſy took place, perhaps much of its violence might have been owing to a mercurial habit, but not a little to about a pint of Madeira wine ſhe drank from the commencement of it. The bleeding and relaxants employed, produced a quick abſorption, and the general inflammation changed the ulceration to a common ſore, which had ſuch a tendency to heal, that it cloſed up in defiance of a ſtimulating ointment applied to keep it diſcharging.

I have confined myſelf to the ſtatement of facts; and how far art had to do with the changes that took place, I leave the profeſſional gentlemen to determine. What I have now to re-

gret is, that neither of them holds out hopes of remedy to suffering humanity afflicted with such a dreadful disease as cancer; and though I admit of the removal of the diseased breast, and swelling in the axilla, by an effort of the constitution,* it is my opinion that neither of the cases was cancer, certainly not idiopathic cancer. All who saw Mrs. Osborn's case, said it was a true cancer; but Mr. Lewis, surgeon, in Half Moon Street, who examined it at this time, was of a different opinion; he had his reasons; and the result of the case satisfies me his decision was judicious. Mrs. Craib's was more equivocal.

CRITICAL RETROSPECT

OF

MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

Samuelis Thomæ Soemmering Tabula Baseos Encephali; Francofurti ad Mœnum. 1799, *impensis Auctoris, with two plates, in small folio, price 2 florins 45 kreutzer, or about* 5*s.*

Few anatomists have acquired such great and unquestionable praise for the anatomy and physiology of the human brain as the celebrated Mr. Soemmering; to him we are indebted for a more accurate knowledge and distribution of the origin of the nerves, of which he has for that purpose given a most excellent table, representing the *basis encephali*; and what is a certain proof of its excellence, Mr. Vicq d'Azyr had it afterwards copied in his valuable work. He was the first who discovered the third and fourth substance, *(substantia subflava et nigricans).* He first proved the sand in the brain to belong to the natural state of it; he first proposed the very interesting and incontestible principle, that man has the greatest brain in proportion to the thickness of his nerves; and lastly, he conceived the most ingenious, though hypothetical idea of

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* See the influence of febrile action in the Aphorisms of Hippocrates, "Febris morbum tollit." and Gaubius, "Licet enim commotio ista, perturbato circulationis systemate gravibusque symptomatis molesta, haud raro perniciem inferat, hinc merito morbus appelletur; sæpe tamen et mirifice adeo salutaris est, ut certius aliud potentiusve cum ad sanandos, tum præcavendos morbus auxilium natura vel ars, vix agnoscat."

of the vapour or water in the ventricles of the brain being the ſeat or organ of the ſoul. After having given ſo many trials of his ſucceſsful endeavours in enlightening the anatomy and phyſiology of the brain, and of his ſkill in repreſenting it, a new Tabula Baſeos Encephali muſt naturally raiſe the expectations of every anatomiſt, particularly, as that which he publiſhed twenty years ago ſeemed to be matchleſs. Mr. Soemmering, however, intended to give here a moſt finiſhed repreſentation of the baſis encephali. "Tabulam, (he ſays) quantam in me fuit, omnibus numeris abſolutam;" and at the ſame time, to diſcuſs again ſome of his former diſcoveries, and ſupport them with new arguments. For this purpoſe, a brain which he had taken out of the ſkull of a boy of three years old, ſeemed to be perfectly calculated, by having all parts complete and viſible; and this he accordingly got drawn under his inſpection by Mr. Köck, a very excellent artiſt. Beſides, as the ſoft brain is very apt to fall together, and by that means to loſe its natural form, the ſkull from which it had been taken was filled with plaſter of Paris, and in this way the true form, though rudely, was repreſented; after which it was corrected and accurately copied in the drawing. The artiſt has been particularly careful with reſpect to the true ſituation of the nerves. The table is engraved by *P. M. Alix* at Paris, in aquatinta, a manner particularly proper for the repreſentation of ſuch ſoft parts as the brain, by marking the ſoftneſs and unperceivable tranſition of one part to another much better than any other method. Although it is rather difficult to preſerve in this manner the accurate ſketches of ſingle parts, yet this is performed by the artiſt in a moſt ſuperior way. All the inequalities and windings of the ſurface of the cerebrum, and each nervous filament are ſo maſterly and diſtinctly figured, without hurting the ſoftneſs of the whole, that this plate may be conſidered as a chef d'œuvre, as well in point of art as in accuracy and preciſion. It bears not only an impartial compariſon with the excellent tables of Vicq d'Azyr, but in many reſpects ſurpaſſes them, and particularly the windings and impreſſions are here better and more faithfully repreſented. The inſertion and ſituation of ſome of the nerves, viz. the fourth, are by no means accurately enough figured in the tables of Vicq d'Azyr; and on a cloſe examination of Soemmering's tables with theſe, they will be found much ſuperior. There are about 300 good copies ſtruck off; the weaker impreſſions are marked with letters, referring to the explanation, and two plates are therefore given with every copy of the publication, a good one, and a weaker print with letters. In the letter-preſs, the author farther diſcuſſes ſome of the diſcoveries he had already mentioned a long time ago. The firſt *dogma* eſtabliſhed by him, is, *that man has the greateſt cerebrum in proportion to the nerves ariſing from it*; or, in other words, *man has the ſmalleſt nerves with the greateſt cerebrum*; and in this diſproportion of the maſs of the brain to the nerves, the reaſon of his mental faculties is founded. This principle has been conſtantly proved by the diſſection of the brains

of

of different animals; and anatomiſts and phyſiologiſts of the firſt rank, Alex. Monro, Vicq d'Azyr, Blumenbach, &c. are ſo convinced of its truth, that it is now conſidered as a phyſiological canon, and a law of animal economy.

The ſecond *dogma* is, that *the human cerebrum differs alſo from the brain of animals by the proportion its ſingle parts bear to one another.* From a compariſon of this table with the bafeos encephali of animals, it appears that the human cerebellum is proportionably much ſmaller than that of animals, that the medulla ſpinalis is likewiſe much thinner, and that the windings of the brain are differently formed. The eminences and tubercles are alſo different from thoſe of animals.

The third *dogma* refers to the largeneſs and property of the brain of a boy three years old, as is repreſented here, viz. to its being almoſt as big as the cerebrum of an adult, which will appear more evident by comparing it with the figures of *Vicq d'Azyr* and *Santorini*. It however differs from the brain of an adult by its ſubſtance being ſofter, its tunica arachnoides thinner; by the darker ſubſtantia corticalis, and whiter ſubſtantia medullaris; alſo, by the nerves being rounder, ſofter, more ſlender and fibrous; the olfactory nerves being thicker and ſhorter, &c. the auditory nerve only having the ſame ſize and ſtructure.

The fourth *dogma*, firſt laid down by Mr. Soemmering, and confirmed in this table, particularly in the olfactory and auditory nerve of the left ſide, is this: *the nerves are conical*, i. e. the more a nerve removes from its origin, the more it increaſes in thickneſs.

Theſe are the moſt intereſting contents of this claſſic publication. It would have been neceſſary to tranſlate it entirely, if we had intended to communicate every intereſting idea it contains, particularly what Mr. Soemmering ſays of the difference of the brains of different animals, &c. but we hope that every anatomiſt will read and ſtudy it.

Samuelis Thom. Soemmering, Icones Embryonum Humanorum; Francofurti ad Moenum, 1799, 10 pp. with two plates in large folio, on vellum paper, price 9 florins, or about 18s.

In this publication Mr. Soemmering has given another inſtance of his great anatomical abilities in throwing a new light upon one of the moſt intereſting parts of Anthropology; and this he has done in ſuch a ſuperior manner, as might be expected from ſuch an able and ingenious anatomiſt, and ſuch a great connoiſeur in the art of drawing. The figures of fœtuſſes which we poſſeſs of Froien Albinus, Wrisberg, William Hunter, and Denman, though they are otherwiſe good, afford no complete repreſentation of an embryo in all the different changes which it undergoes from its firſt appearance till the fourth and fifth month. What is paſſing with it after that period, is moſt maſterly repreſented in the valuable work of William Hunter, which will be conſidered as an eternal monument of the high degree of perfection the art of engraving

graving has reached in England. The preſent work of Mr. Soemmering is to be next ranked, equalling it with reſpect to the form in which it is publiſhed, and particularly in the elegance and accuracy of the drawing and engraving. On the firſt plate there are 17 fœtuſſes, figured from the third week after the conception to the firſt half of the fifth month. The ſecond table repreſents in two figures an entire ovum of 5 months, and in the third figure the embryo taken out of it. All theſe figures are drawn with great accuracy in the natural ſhape, and in the very ſituation in which they were obtained. Every change produced by their being kept in ſpirit of wine, the wrinkles, &c. are juſtly omitted. On the title page two ova, one opened, and the other unopened, are likewiſe moſt excellently repreſented. We ſhould wiſh to give an extract of the explanation of the figures, which is interwoven with many new and inſtructive remarks, but we are afraid of exceeding the limits of this Journal, and we only beg leave to ſubjoin the general remarks premiſed to the explanation, as, on account of their novelty and general intereſt, they deſerve to be communicated to our readers. The embryo increaſes very faſt during the firſt days and weeks, but ſlower afterwards, and never in equal proportion; for, in the ſecond month it ſeems to grow ſlower than in the third; in the beginning of the fourth month in a ſtill leſs degree; while, in the middle of that month, it increaſes more till the ſixth, when, about this time, it begins to grow in a leſs degree till the ninth month. The ovum is proportionably greater and bigger the younger the fœtus is. In the two firſt months the fœtus keeps itſelf in a bent ſituation, ſtretching itſelf afterwards; but towards the end of pregnancy it takes again the former poſture. The head hangs down in every period, bearing always a larger proportion the younger the fœtus is. In very early ones the head exceeds the reſt of the body in largeneſs, and that part which contains the brain has a larger proportion than the face, the younger the fœtus is. The moſt formed parts of the head in the beginning are the oſſa temporum, but of the neck no rudiments can be traced in the third month. The limbs appear like ſmall roundiſh knobs, increaſing and forming in the ſecond month. The eyes, in very ſmall fœtuſſes, ſhew themſelves as two ſmall black dots, the eye-lids open in the ſecond month, or at leaſt are ſo tranſparent that theſe dots are viſible; they ſhut afterwards: the external part of the iris is formed earlier than the inner. The external ear forms in the following progreſſion: At firſt the middle part of the helix is remarked, then the tragus, then the antihelix and the lobe of the ear, and at laſt the ſuperior and inferior part of the helix; and in the fifth month the cornea and ſcapha are formed; however, the total form of the ear is by no means ſo perfect as in an adult. The noſe of a fœtus is likewiſe differently formed. The genitals are from the beginning evidently conſpicuous. The penis is more elongated in very young fœtuſſes, and the glans uncovered. In female fœtuſſes a rima is perceived in lieu of the genitals; and in the third month the clitoris begins to be viſible, and appears prominent till the

the ſixth month. The umbilical chord is ſhort and thick at firſt, but grows more in length afterwards. Mr. Soemmering has remarked in ſeveral well preſerved, even very young, fœtuſſes the following ſexual differences: The thorax is moſt ſtrikingly different in both ſexes. In the male fœtus it is longer, conical, and wider, than the belly and pelvis. The female thorax is ſhorter, widens till the fourth rib, where it becomes narrower, and its diſtance from the pelvis is greater; female fœtuſſes are flat breaſted and big bellied. Another mark of difference lies in the head, which is bigger in the male fœtus, but leſs round, &c. The ſuperior extremities are longer in a male fœtus; the ſhoulder-blades ſtronger and prominent, the arms more conical, the fore arm more fleſhy, the carpus broader, and the tops of the fingers more pointed. The inferior extremities lie cloſer together in a male fœtus, are more ſlender, and the knuckles and heels are thicker, and the great toe larger than in a female fœtus. There is likewiſe a ſexual difference in the back bone, which however is not expreſſible by a figure. Mr. Soemmering concludes by entering into the queſtion, whether the ſame faculties of the mind and body are innate in men, or whether the different conſtruction of the body produces a difference in thoſe mental faculties? and he is inclined to aſſent to the ſecond part of the queſtion.

Pathologiſch Praktiſche Abhandlung, i. e. Pathological and Practical Diſſertation on the vapours, or wind in the inteſtinal tube, intended for Phyſicians and invalids. By J. Ch. G. Ackermann, Profeſſor at the Univerſity of Altdorf, 1800. Altdorf and Nuernburg, in 8vo. pp. 386, price one rixd. or about 3s. 6d.

Amongst the medical publications that appeared laſt Eaſter, the preſent deſerves a particular notice. Dr. Ackermann treats in the firſt chapter of the different gaſiform fluids contained in the inteſtines; in the ſecond, of the preternatural ſtate of them; in the third, of the ſymptoms that originate from an accumulation of air in the inteſtinal canal; in the fourth, on the cauſes of the wind or flatus; in the fifth, of the cure; and in the ſixth, of what manner of life, perſons ought to obſerve for preventing them. Although we have met in the peruſal of this book, ſome inaccuracies, and although we could wiſh that the author had been more copious in its dietetical part, as it is not only devoted to profeſſional men, yet we can juſtly recommend it as containing a great deal of information, and it may prove equally inſtructive to the phyſician as well as to the common reader.

Professor Reich's Theory and Practice of Fever.

The public have been already informed, through the medium of this Journal, of the diſcovery of a new remedy, founded upon a peculiar theory, with which Profeſſor *Reich* pretends to cure all fevers, of whatever deſcription they may be. This matter engaged the attention of the public ſtill more, when the King of Pruſſia

Pruſſia ordered a committee, conſiſting of the moſt reſpectable phyſicians of Berlin, to whom the Profeſſor was to communicate his arcanum, for inquiring into the nature of that diſcovery; and in caſe it ſhould in ſome meaſure be found ſatisfactory, the inventor was under the condition of publiſhing it for the benefit of the community, and to receive a due reward from the king.

The reſult of that inquiſition proving, on the whole, not unfavourable to Dr. *Reich*, a pamphlet is now publiſhed, in which both the theory and practice of his new method are propoſed. It is entitled, " *Gottfried, Chriſtian Reich, M. D. und Profeſſor, &c. vom Fieber und deſſen Behandlung Uberhaupt*; i. e. on Fever, and its Treatment in general; publiſhed at the order of His Majeſty the King of Pruſſia, by the Collegium Medicum et Sanitatis: Berlin, for Frederic Maurer, 1800; pp. 102, 8vo.

We ſhall endeavour to give our readers a faithful extract of this publication, upon which the general attention is now fixed, and we leave it to their judgement, whether the principles laid down in it, deſerve ſo much regard as has been ſhewed to them by this public tranſaction under the authority of an enlightened king. The whole is aphoriſtically diſpoſed in paragraphs; and firſt, the theory is explained upon which the practice is founded; and then concluded, with marking the advantages which may reſult to the art of healing as well as to the community, from this new method of cure.

" All functions of the human body, ſecretions as well as excretions, are produced by the continual action of animal chemical proceſſes, whereby the mixture of organic matter is perpetually changing. Theſe proceſſes originate in the uninterrupted reaction of powers or principles, that act in oppoſition to one another; and from the reciprocal action of thoſe oppoſite principles, reſults *life*, which conſiſts *in a continual tendency of heterogeneous matters towards homogeneity;* or, in other words, *in a continual circular motion, produced by the conflict of adverſe principles.* Organization being now a chemical product, its actions or qualities, vis vitalis, incitability, ſenſibility, irritability, &c. have a chemical origin; and conſequently all actions of ſingle parts of the human body, are founded in animal chemical proceſſes. The actions of the fluid parts of the human body, owe evidently their origin to theſe proceſſes; and as all ſolid parts may be reduced to fluids, their actions likewiſe depend on them. It is, however, to be remarked here, that the word *fluid*, as well as that of *chemical*, muſt be taken in the moſt extenſive ſenſe, according to which it comprehends all gaſiform ſubſtances, and even thoſe that cannot be repreſented by themſelves, and which we know under the name of magnetic, Galvanic, electric matter, &c. From theſe principles it follows, that all changes of the human organic body, depend on the changes of its chemical qualities, and that even the faculties of the mind are influenced by them, which, however, are able to re-act upon the chemical qualities. The body being expoſed now according to the common courſe of nature, to a continual influ-

ence of chemical powers, that manifeſt a continual tendency to homogeneity, it is only capable of retaining its exiſtence by oppoſing to this, a tendency to heterogeneity; and as long s thoſe chemical potencies do not acquire a ſurplus, or as long as the animal chemical proceſſes proceed under the above condition, the body will retain its identity, i. e. it will continue to live; but as ſoon as its proceſſes are no more produced after animal chemical, but after the dead phyſico-chemical laws, it will ceaſe to live, and enter into the power of the common courſe of Nature. The animal chemical proceſſes differ from the dead chemical or phyſical, by having their place of action in the animated body, where the common laws of chemical affinity are differently modified.

" The moſt important animal chemical proceſſes, are *respiration* and *nutrition*; at the ceſſation of either of them, death is the inevitable conſequence. Reſpiration is the moſt neceſſary and primitive function of the human conſtitution, to which all other functions are ſubordinate. The body obtains by reſpiration from the atmoſpheric *oxygen*, a neceſſary principle for its preſervation. Beſides this, the atmoſphere contains another eſſential conſtituent, *the azote*, and a ſmall proportion of *carbon*, all which ſubſtances are combined and reduced to the conſiſtency of gaſes by the *calorique*. It is known that atmoſpherical air is only fit for reſpiration by containing *oxygen*, but in ſo looſe a ſtate, that it eaſily ſeparates in the lungs from its combinations with the other conſtituents. Reſpiration now is to be conſidered as one of the moſt ſimple animal chemical proceſſes, becauſe the combination of the oxygen with the blood during the act of breathing, is effected according to the pure laws of chemical affinity. But when oxygen is only conſumed in reſpiration, it may be aſked, why has Nature provided the atmoſphere with ſuch a great proportion of azote, that is unfit for reſpiration? and why does the atmoſphere not merely conſiſt of gas oxygen? This queſtion however is eaſily anſwered, when we conſider that life is founded upon a conteſt of adverſe principles, which are here the *azote* and the *oxygen*, both of which muſt be looked upon as the proper principles of life. It is highly probable, without any farther proof, from the ſurplus of the *azote*, *that this is the ſtimulating, or exciting, poſitive principle of life*; *whereas the oxygen is the tempering, mitigant, limiting, negative principle of life.* The function of the nerves ſeems to conſiſt in ſerving as conductors of thoſe principles, an opinion which gains great probability by the Galvanic experiments. The exiſtence of the body, however, does not entirely depend on theſe two principles, *azote* and *oxygen*, but it obtains by nutrition other principles, which muſt neceſſarily be united with thoſe, in order to ſupport organization. The aliments being diſſolved by nutrition into their elementary particles, nutrition deſerves with equal right the appellation of an animal chemical proceſs, and all ſecretions as well as excretions belong to the proceſs of nutrition. The different ſubſtances proper for nutrition, and for this purpoſe ſecreted in the body, or evacuated from it, are always influenced by the abſolute

laws

laws of chemical affinity, which are, however, differently modified in the human living body, by ſeveral circumſtances and conditions.

" As long as theſe laws of chemical affinity are thus modified, there is always an equilibrium of the different functions of the human body; this remains in a ſound ſtate: but as ſoon as the equilibrium is diſturbed, and the laws of affinity declining from the vital path, approach to the dead chemical affinity, a tranſition into a diſeaſed ſtate takes place. The ſecretions being ſubordinate to the proceſs of nutrition, experience the ſame morbific change, when that proceſs is affected in a diſeaſed manner. This is proved by the products of the ſecretions and excretions, that appear more or leſs changed in a morbid ſtate, which is particularly evident in fevers, where no excretion or ſecretion exiſts, which muſt not be, or is not changed, viz. urine, alvi excretio, breath, tranſpiration, blood, gall, &c. Fevers, therefore, differ only from a healthy ſtate of the body, by the excretions and ſecretions being thus changed, that the general equilibrium of the different organs and conſtituent particles is diſturbed, and conſequently a general diſproportion in them produced. As the ſecretions and excretions in the ſound ſtate, as well as in fever, conſiſt in a ſeparation and combination of the different ſubſtances operating in the body, regulated according to the laws of organization, they may be compared with the proceſs of fermentation, which goes on naturally and regularly in a ſound ſtate, and is diſturbed when the body is diſeaſed, where at the ſame time the general equilibrium is deranged. However, in drawing this compariſon, it muſt always be regarded that this fermentation proceeds in a living body, where the common laws of fermentation cannot indiſcriminately be applied, but ſuffer a change by the organization. Fever therefore is a modification of life, which by its form and generic character, differs from any other modification, which we comprehend under the idea of diſeaſe. All fevers, from the *ephemera* to the *plague*, the higheſt degree of febrile affection, are ſpecies of the ſame genus, ſuppoſing they have the ſame generic character, or ſomething peculiar and eſſential common to them all, without which they cannot be ranked under the name of fever. This generic character is not materially perceptible, but rather abſtruſe, and only noticed by collecting and comparing the phenomena of fever and the perceptible external cauſes. We only obſerve that every thing which diſturbs the juſt and general proportion of both principles of life, among one another, or with the other ſimple or compound ſubſtances that the body contains, produces a preternatural fermentation, and excites ſuch ſymptoms which are aſcribed as peculiar to fever. Theſe ſymptoms conſiſt in a greater or leſs change of all ſecretions and excretions, depending on a diſturbed proportion of the ſubſtances acting on the body, and in it, which is effected on abſolute diminution, or chemical adaptation of oxygen, influenced by certain external circumſtances.

" The generic character, or the nature of fever, conſiſts ac-

cordingly *in a preternatural ſeparation and combination of the moſt ſimpl conſtituent particles of the human body, effected by a preternatural, abſolute or relative, topical or general, diminution of oxygen.* This diminution of the oxygen is as eaſily occaſioned by external as by internal cauſes. Among the external cauſes may be counted, beſides the common miaſmata and corrupted particles of the atmoſphere, the exanthematous contagia, which when received into the body cauſe a fermentation, whereby the due proportion of oxygen towards the other elements of the body is abolished, and a preternatural ſeparation and re-union of them produced. As the ſound ſtate of the body comprehends a continual ſeries of animal chemical proceſſes, or, in other words, a continual fermentation, ending and beginning with every moment, all external things or circumſtances, interrupting or diſturbing the natural progreſs of theſe proceſſes, are capable of exciting a fever, and the temperature of the air, the ſtate of electricity, have a great influence in this reſpect. The internal potencies which produce a febrile ſtate, are either pre-exiſtent or generated in the body; and every thing that diſturbs the action of the ſolid parts, muſcles, nerves, and veſſels, proceeding according to chemical laws, is able to produce a fever, in which likewiſe mental impreſſions have no ſmall ſhare.

" The proximate cauſe, therefore, of all fevers is grounded either in an obſtructed due reception of oxygen, or in the preternatural adaptation of it, and in the exceſſive accumulation and extrication of azote, hydrogen, carbon, ſulphur, and phoſphorus, and all other elementary particles of the body, and in the various combinations of theſe ſubſtances with one another, or with acceſſory ſubſtances by which they are modified, as light, calorique, magnetic, and electric matter. The phenomena of fever differ according to the ſhare which either of thoſe ſubſtances have in producing the febrile ſtate, according to their particular ſeat of action to the degree and manner of combination, and according to the incitability or activity of the organic parts, which is hereby influenced. When the organiſm has not yet loſt its power or incitability, to re-eſtabliſh the due proportion of thoſe principles, and no organ neceſſary for life is injured or deſtroyed, and the animal chemical proceſſes do not yet too much approach to the dead chemical or phyſical laws, every fever muſt and will ſurely and radically be cured, *by reſtoring the want of oxygen* in ſuch a manner, that no viſcus neceſſary for life is endangered by it.

" *Oxygen* is therefore the only ſure remedy againſt fever, which, though it may differ by its origin, always depends on an abſolute or relative want of it. As this element cannot be exhibited by itſelf, thoſe ſubſtances muſt be employed for the cure of fevers, in which it is contained in the moſt pure and ſimple ſtate,—and theſe ſubſtances are *the acids*. Every acid being the production of a baſis acidifiable and oxygen, an acid is more proper for the cure of fever, the leſs of the former and the more of the latter it contains. On this

this account, *the mineral acids* surpass all other, and are particularly adapted for the purpose.

Professor Reich proceeds now to answer the objection which may be made to him, that oxygen is too strictly adherent to the acidifiable basis of the acids, to be separated in the body.—"Every combination of an acid with other substances, is a process of combustion, which cannot take place without the combination of the oxygen with the combustible element. That the combination of an acid with other substances, is to be considered as a process of combustion, appears from the action of strong mineral acids upon vegetable and animal substances, which are thereby destroyed; and this combustion is more vehement and perfect when the acid is strong, less perceptible when it is weak: oxygen, however, is always disengaged by it. The same process now proceeds in the body, by the acids uniting in the substances it meets there; the degree of combustion differs according to the strength of the acid and the general temperature of the body. It is very probable, that even *muriatic acid*, which has not yet been decomposed by the common proceedings of experimental chemistry, on account of its too great affinity to oxygen, suffers that decomposition in the human organism; for salt seems to be very necessary for mankind, &c.

"Although it seems contradictory to assert, that the excessive accumulation and extrication of calorique is prohibited in the quickest and surest way by mineral acids, and whereas we know by a common experiment, that at the combination of such an acid with other substances, a great deal of calorique is set free, yet it may be thus explained: Mineral acids are never given in a pure state, and without being previously diluted; and those substances with which they are diluted, are always deprived of a great part of their calorique. If now, at the combination of the oxygen with organic fluidities, the calorique is disentangled, it is immediately imbibed by those substances which are in want of it, and again bound; it is no more in a free state, as it was in the dry febrile heat, but it goes off with the secretions and excretions, according to the natural progress of organism.

"But if we even abstract from all theoretical reasoning, experience bears also evidence to these ideas, as acids have been empirically found to be the best remedies against fever. Fevers, therefore, are only cured when such a quantity of oxygen is brought into the body and equally distributed in it, as is required for re-establishing the equilibrium amongst its different constituent particles, which was disturbed by the febrile motions. The Professor draws now a nearer comparison between the process of fermentation and a febrile state, which, as is abovementioned, he considers as a fermentative act, in which the common laws of fermentation take place, modified only by organism. As this is influenced by the temperature and the addition of several substances, the same happens in a fever where the restoration of the equilibrium is in a similar way either promoted or disturbed, or preternaturally changed.

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The progreſs of fever requires, like fermentation, certain periods, before it is accompliſhed, and runs alſo through different ſtadia, before the fever is removed by criſes.

" Led by theſe principles, and by the inſtinct of febrile patients for the uſe of acids and other ſubſtances that contain an abundance of oxygen, and induced by former experiments, which proved their efficacy in fevers, Dr. Reich diſcovered *the mineral acids* to be the ſureſt remedies againſt fever, and he even applied them with hopes of ſucceſs in the laſt periods of fevers, where death ſeemed inevitable; and no phyſician had yet conceived the indication of employing them, nor ever adminiſtered them. He thought himſelf the more entitled to entertain hopes of ſucceſs, as there is no abſolute danger in fevers; for if we conſider life as an animal chemical proceſs, it can only be endangered when the general mixture of the conſtituents of the body approaches to the higheſt degree of animal fermentation, by which the equilibrium is either reſtored or entirely ſuppreſſed by a chemical deſtruction of incitability. This degree of animal fermentation enſues either according to the natural and peculiar courſe of that proceſs, or is brought on by different external and internal cauſes; and the danger of life increaſes in proportion to the velocity with which the animal fermentation runs through the different ſtadia to the higheſt degree.

" It remained now to determine, in what quantity the acids may be given. For this purpoſe, Prof. Reich made experiments on himſelf, and began to take ſulphuric acid, the internal uſe of which had been long ago recommended; and he aſſures us, that after having purpoſely cauſed himſelf an indigeſtion, he conſumed by degrees in one hour, a whole ounce of concentrated ſulphuric acid, which was diluted with a great quantity of water. This large doſe had no other effect, but that the belly was a little inflated, a great quantity of wind went off, and after a reſtleſs night, ſeveral ſtools followed."

The firſt caſe in which it was made uſe of, is related in his *Caſes of Diseases*, (in German) Nurnberg, 1800, Vol. I. " Every ſymptom of approaching death was preſent here, ſingultus, ſubſultus tendinum, &c. which he conſidered as Galvanic convulſions, produced by the ſurplus of ſubſtances oppoſite to oxygen. About one hundred drops of concentrated ſulphuric acid, diluted with a ſufficient quantity of ſcrup and water, were adminiſtered the firſt time; but as a vomiting was brought on by this doſe, the ſecond conſiſted only of fifty drops, and likewiſe the third, and the remaining two, full doſes of two hundred drops. The abdomen of the patient being much inflated with a great degree of tenſion, a ſymptom originating from the generation of different gaſes, Dr. Reich determined to try the external application of acids, particularly as he was conſcious of the great avail of clyſters of vinegar in any ſtate of malignity. For this purpoſe, muriatic acid ſeemed beſt to be calculated, becauſe it is milder and more volatile than the ſulphuric acid, and eaſily combines itſelf in the form

of

of a gas with other gaſes. A clyſter of warm water was accordingly applied, with forty drops of muriatic acid, which, as it produced an evacuation by ſtool, with much wind, to the conſiderable relief of the patient, it was repeated a ſecond time. The ſucceſs of theſe two remedies fully anſwered the expectations which had been entertained of them; and the patient got, by the external uſe of ſulphuric acid, and the internal uſe of muriatic acid, quite out of danger, after the ſpace of two hours, and entirely recovered."

[To be continued in our next.]

A Proſpect of exterminating the Small-Pox; being the Hiſtory of the Variolæ Vaccinæ, or Kine-Pox, commonly called the Cow-Pox; as it has appeared in England; with an Account of a Series of Inoculations performed for the Kine-Pox, in Maſſachuſetts. By BENJAMIN WATERHOUSE, M. D. Fellow of the American Philos. Society; and Profeſſor of the Theory and Practice of Phyſic in the Univerſity of Cambridge, 8vo. pp. 40. Boſton, 1800.

We have peruſed this very judicious and accurate work with uncommon gratification. The ſame temperate and philoſophic ſpirit which characterized Dr. Jenner's publications, have been caught by Dr. W. and we have no doubt that his countrymen will conſider him as the Jenner of the weſtern world.

"In the beginning of the year 1799, I received from my friend, Dr. LETTSOM, of London, a copy of Dr. EDWARD JENNER'S "*Inquiry into the cauſes and effects of the* VARIOLÆ VACCINÆ, or Cow-Pox;" a diſeaſe totally unknown in this quarter of the world. On peruſing this work, I was ſtruck with the unſpeakable advantages that might accrue to this country, and indeed to the human race at large, from the diſcovery of a mild diſtemper that would ever after ſecure the conſtitution from that terrible ſcourge, the ſmall-pox. My attention was not the leſs awakened by a previous impreſſion that the ſmall-pox came originally from the brute creation; for all that I could recollect of the hiſtory of the famous Mahomet, and his *ſucceſſor*, and of modern Arabia, conſpired to ſtrengthen the idea that the ſmall-pox came to the human race through the brute creation.

"Perceiving that this diſeaſe began to excite a ſpirit of enquiry among our literary men, I deemed it of importance to collect and examine every thing that had or might be publiſhed on the ſubject, and to acquire, from my correſpondents in England, every information reſpecting a diſtemper ſo intereſting to humanity.

"As the great queſtion which the profeſſional public were anxious to have reſolved was, *whether a perſon who had been fairly infected with the genuine* COW *or* KINE-POX, *were thereby ſecured againſt the ſmall-pox*, I bent all my enquiries to aſcertain this point.

"It would be ſuperfluous to mention every queſtion I put, and tedious to relate the different anſwers received. Suffice it for the preſent to ſay, that I made my enquiries of the phyſicians living in different

different parts of Great Britain, and of thoſe too who were the leaſt ſanguine, although moſt intereſted in the event; of men, who objected much, and believed ſlowly, yet have in the end become its moſt potent advocates. And I do now deliberately declare, that I have received a croud of evidence in confirmation of the doctrine, "that the cow, or kine-pox renders the human frame unſuſceptible of the ſmall-pox," too great to be reſiſted by any mind not perverted by prejudice. In truth, the ſubject has been traced in England, by thoſe who doubted, until conviction became too ſtrong for argument, and theoretical objections gave way to ſtubborn facts. The conſequence has been, that THIRTY THOUSAND perſons, from two weeks old and upwards, have paſſed ſafely through the diſeaſe. Dr. JENNER has been particularly noticed by the KING, who gave him permiſſion to dedicate the new edition of his book to him.

"But diſtance of ſpace operates on ſome minds like diſtance of time. People are not ſo ready to believe what happened a great while ago, or a great way off. I therefore found it neceſſary to bring the matter home to us, and to repeat in America the experiments performed on the other ſide the Atlantic. I wiſhed alſo to examine another *important fact*, of which ſome eminent phyſicians in London expreſſed ſome doubts, and which I myſelf was anxious to ſee more firmly eſtabliſhed, namely, *whether this new diſeaſe, this* COW-POX, or KINE-POX, (denominate it which you will) *be really not* CONTAGIOUS, *or catching from one perſon to another.* And I do now aſſert, that from all the experiments hitherto made public, it clearly appears, that *this ſubſtitute for the ſmall-pox cannot be communicated by any other means than by the actual* CONTACT OF MATTER; or, in other words, *is not catching from one perſon to another by effluvia, like the ſmall-pox or meaſles.* Even the cows do not convey the diſtemper by effluvia, or when there is a fence or hedge interpoſed between them; and not, ſays Dr. JENNER, unleſs they be handled or milked by thoſe who bring the infectious matter with them.

"Having thus traced the moſt important facts reſpecting the cauſes and effects of the *kine-pox* up to their ſource in England, and having confirmed moſt of them by actual experiment in America, one experiment only remained behind to complete the buſineſs. To effect this, I wrote the following letter to Dr. ASPINWALL, phyſician to the *Small-pox Hoſpital* in the neighbourhood of Boſton.

DEAR DOCTOR, *Cambridge, Aug. 2d,* 1800.

"You have doubtleſs heard of the newly deſcribed diſorder, known in England by the name of the *cow-pox*, which ſo nearly reſembles the ſmall-pox, that it is now agreed in Great-Britain, that the former will paſs for the latter.

"I have collected every thing that has been printed, and all the information I could procure from my correſpondents, reſpecting this diſtemper, and have been ſo thoroughly convinced of its importance to humanity, that I have procured ſome of the vaccine matter,

matter, and therewith inoculated ſeven of my family. The inoculation has proceeded in ſix of them exactly as deſcribed by WOODVILLE and JENNER; but my deſire is to confirm the doctrine by having ſome of them inoculated by you.

"I can obtain variolous matter, and inoculate them privately, but I wiſh to do it in the moſt open and public way poſſible. As I have imported a new diſtemper, I conceive that the public have a right to know exactly every ſtep I take in it. I write this, therefore, to enquire whether you will, on philanthropic principles, try the experiment of inoculating ſome of my children who have already undergone the cow-pox. If you accede to my propoſal, I ſhall conſider it as an experiment in which we have co-operated for the good of our fellow-citizens, and relate it as ſuch in the pamphlet I mean to publiſh on the ſubject.

I am, &c. &c.

B. W.

Hon. WILLIAM ASPINWALL, Eſq. Brookline.

"To this letter the Dr. returned a polite anſwer, aſſuring me of his readineſs to give any aſſiſtance in his power, to aſcertain *whether the cow-pox would prevent the ſmall-pox;* obſerving, that he had at that time freſh matter that he could depend on, and deſiring me to ſend the children to the hoſpital for that purpoſe. Of the three, which I offered, the Doctor choſe to try the experiment on the boy of 12 years of age, mentioned in page 20, whom he inoculated in my preſence by two punctures, and with matter taken that moment from a patient who had it pretty full upon him. He at the ſame time, inſerted an infected thread, and then put him into the hoſpital, where was one patient with it the natural way. On the 4th day, the Dr. pronounced the *arm* to be infected. It became every hour ſorer, but in a day or two it dried off, and grew well, without producing the ſlighteſt trace of a diſeaſe; ſo that the boy was diſmiſſed from the hoſpital, and returned home the 12th day after the experiment. One fact, in ſuch caſes, is worth a thouſand arguments.

"It is proper to mention, that there are ſome circumſtances, which if not attended to critically, may bring the inoculation of this recently imported diſtemper into a temporary diſrepute. Dr. Jenner, aware of ſuch an accident, has pointed out the fallacious ſources whence a diſeaſe imitative of the *variolæ vaccinæ*, or *kine-pox*, may ariſe, with a view of preventing a ſpurious diſeaſe.

"It was juſt about the ſame time, that Dr. SIMS wrote the letter referred to in page 33; ſo that the flattering proſpect of baniſhing the ſmall-pox for ever from Great Britain, ſeemed to be obſcured for ſeveral weeks. But Dr. JENNER, and Mr. R———; a very diſtinguiſhed ſurgeon and native of the county where the cow-pox firſt appeared, undertook to examine how it happened, that a diſtemper ſo mild in Gloceſterſhire, ſhould be converted into a pretty ſevere diſeaſe in London. This matter was unravelled, and the end of it appeared to be this: The firſt ſubjects inoculated for the kine-pox, were chiefly people maintained as *poor*. They were

inoculated at the ſmall-pox hoſpitals, and ſeveral of them for both kinds, ſmall-pox and kine-pox at the ſame time, or at an interval of a day or two, by way of experiment; and it is more than probable, ſays one of my correſpondents, that a lancet infected with variolous matter, was uſed for inoculating for the kine-pox. Be that as it may, it is certain that the patients of a celebrated inoculator, had the diſeaſe with greater ſeverity than any other practitioner. In general, the patients had more fever, ſorer arms, and more puſtules in London, than in the country. Thoſe of the author's friends who have urged him to eſtabliſh an hoſpital for the kine-pox, will now ſee more clearly, the reaſons for not following their advice.—An hoſpital might poſſibly heighten a very mild diſtemper into a formidable diſeaſe.

" After this ſucceſsful inveſtigation, inoculation for the kine-pox went on with redoubled activity; inſomuch, that from the date of Dr. Sims' letter, to May following, (juſt about a year) 29,400 perſons of all ages, paſſed through the diſeaſe without a ſingle death!"

Dr. W. concludes with the following *Poſtſcript*.

" Although I am convinced that the kine-pox is a ſhorter, ſafer, and pleaſanter diſeaſe than the inoculated ſmall-pox, even when conducted in the moſt fortunate manner, yet there is ſome danger of people conceiving too lightly of it. The inoculation of between fifty and ſixty perſons of different ages and habits, has taught me, that the kine-pox requires ſome care on the part of the patient, as well as attention on that of the phyſician; and I give it as my decided opinion, that an abſtinence from animal food and from ſtimulating drinks, is as neceſſary in the inoculation of the kine as in that of the ſmall-pox. A few examples will illuſtrate what I wiſh to convey. Two young gentlemen were rendered ſomewhat uncomfortable for three or four days in conſequence of eating and drinking as uſual. One, the leaſt attentive to directions, after walking to and from Boſton, in a very hot day, had his febrile ſymptoms very much aggravated. His head ach was excruciating, and a ſlight delirium came on in the evening, with a ſtricture acroſs the region of the ſtomach, equal to what we ſometimes find in the caſual ſmall-pox. Such imprudent conduct might have deſtroyed him if inoculated for the ſmall-pox. A boy, after eating green-corn, was crammed with fruit, under the abſurd idea that ripe fruit can hurt no one, ſo that with the ſymptoms of kine-pox was joined a cholera morbus. In another boy, the mumps appeared about the 4th day, and arreſted the infection. I could add ſome other inſtances to prove that this new diſeaſe, mild and ſafe as it is, requires more of the phyſician than merely putting the matter into the arm; but as this treatiſe is addreſſed not ſo much to the phyſician, as to the common ſenſe of all, I purpoſely avoid profeſſional directions or criticiſms.

*** *We embrace this opportunity of returning our thanks to Dr. Waterhouſe, for his very polite attention to us; and of aſſuring him, that all hints and propoſitions coming from ſuch reſpectable authority will receive particular attention from us.*—Edit.

A Conſcious View of Circumſtances and Proceedings reſpecting Vaccine Inoculation, &c. &c. 8vo. pp. 76. *Bath*, 1800.

It is impoſſible for a candid mind to read this illiberal, and we may ſay ſcurrilous pamphlet, without feeling the moſt lively indignation. We ſhould not have noticed it but for the ſake of announcing an anſwer to it, which is in the preſs.

MISCELLANEOUS INTELLIGENCE, OBSERVATIONS, AND HINTS.

To Dr. BRADLEY.

Dear Sir,

Having been politely favoured with a view of the accurate ſtatement ſent to your valuable Publication, reſpecting ſome ſuppoſed caſes of Cow-pox, which happened in the neighbourhood of town, I beg to inform you that I had previouſly ſeen theſe unfortunate ſubjects, and ſince repeated my viſit; and from inſpection, and the whole hiſtory of the caſes, am of opinion with thoſe reſpectable gentlemen who ſigned the ſtatement, that the diſeaſe was not the cow-pock, but morbid ulceration, originating from the purulent matter formed under the ſcab, or dried puſtule of the cow-pock, with which the patients were infected.

Before I had ſeen the ſtatement, I had made enquiries reſpecting the origin of the matter from whence theſe were inoculated, and have no doubt of its having been the genuine cow-pock with which the child of my next door neighbour was inoculated; and from this my own grand-child, and the child of a reſpectable ſurgeon of my acquaintance, were inoculated, as well as the children of ſeveral other families, not one of whom ſuffered under any complaint requiring medical aſſiſtance; and yet from one of theſe was this purulent matter unfortunately taken. I have therefore no reaſon, from any thing connected with the cow-pock that ever came under my obſervation, to change the high opinion I entertain in favour of this new mode of obviating one of the moſt fatal diſeaſes to which mankind are liable.

I am, reſpectfully, &c.

London, Nov. 25, 1800. J. C. LETTSOM.

The two following Extracts are taken from Letters addreſſed to Mr. Chamberlain, Surgeon, of this City, viz.

Sir, *Delvine, Aug.* 24, 1800.

As it is two years ſince I applied to you for ſetæ of cowhage, you muſt have been led to imagine, that I did not find it uſeful to my poor patients, that I never wiſhed for more; but the truth is, that I approved of it ſo much, that I employed a druggiſt at

Edinburgh to provide it for me, and have made use of a very considerable quantity. I find the account you give of its innocence is perfectly just, and that where it does no good it never does any harm. It does great service in fevers, even where infection and not worms is the primary cause of the disease; and amongst the commonality, who live mostly on vegetables, fevers and coughs are very frequent during lying-in, and I have four or five times given your electuary in such cases, and always with the best effects. In this country, delirium or derangement of the melancholy kind is a common disease, and I find that worm medicines never fail to do good; my usual prescription in a very bad case, is first, tartar emetic, then cowhage in much larger doses than what you recommend."

Kingston, Jamaica, Sept. 15, 1800.

I am astonished to hear that some physicians in England have written to their friends here of the "madness of our practice." I shall not call them mad; but I think them blameably presumptive in writing of what they know nothing at all. For, if they are eminent, their opinions may poison the minds of such unfortunate strangers as may be taken ill, so as to make them object to the only treatment that has a chance of saving them from the most fatal of all diseases yet known, scarcely the plague itself excepted. I will aver that a Cullen, or any other high medical character, never having seen the disease, would be puzzled and baffled if he pursued any other course. Mercury, we know, can cure many other diseases without its peculiar action on the salivary glands; but here it will not: for I have not yet known an instance but one which has been cured without salivation; and never have seen or heard of one that died, when that discharge could be produced. In this solitary case the mercury (say 700 or 800 grains of cal. besides several ounces of merc. oint. by frictions) seemed to act by profuse perspiration, as it had no other effect whatever. I have reason to think that it operates so in the cures; because, when it was counteracted by bark, which was insisted on by a consulting physician, the patient had a return of bad symptoms, which were banished by a discontinuance of the bark, and a perseverance in the use of mercury, until the patient got well. Bark, though an excellent medicine in proper cases, has sent many to the grave, whom, in all probability, mercury would have saved. Therefore, my friend, whenever you may have an opportunity of giving advice to adventurers coming this way, never neglect to recommend having the salivary glands slightly affected by mercury before they embark, or immediately on their arrival on the spot of infection. I have had so many instances of the good effects of prophylaxis, that I can recommend it with confidence. Indeed it is a duty which I, and I trust you, think indispensable to perform for the good of our fellow creatures. It is a lamentable fact to acknowledge, that notwithstanding this only yet known remedy for this dreadful scourge of new comers, it fails too often after the commencement of the disease; although it has done wonders in very desperate cases, after late application.

To

To Dr. BRADLEY.

DEAR SIR,

At the concluſion of your laſt Number I obſerve, that Dr. Niſbet has introduced my name as a collateral ſupport to his narrative of a caſe of cancer recently cured. I *once* viſited the patient alluded to, and have no objection to give you MY OWN ſtatement of what I then ſaw; but as I know nothing of the progreſſive ſtages of the complaint, nor of the medical treatment, which remains a profound ſecret, my teſtimony can ſerve no good purpoſe.

I remain, &c.

Great Ruſſell Street, Bloomſbury, November, 3, 1800. WILLIAM BLAIR.

A Sketch of the University of Cambridge, Maſſachuſetts, founded 1630, *with ſome Account of its Medical School.*

I have obſerved in your very valuable volumes of the Medical and Phyſical Journal, mention made of ſeveral American medical ſchools, lectures, &c. while the one at Cambridge, the moſt celebrated in the weſtern world, paſſes without much notice, although it has flouriſhed more than a century before moſt of thoſe you mentioned had an exiſtence. Cambridge is the mother ſeminary of the United States, and was founded ſoon after the ſettlement of the country, by perſons educated at your Oxford, and particularly your *Cambridge*; its profeſſors came directly from theſe univerſities in the reigns of Elizabeth and James. The univerſity library contains about 14,000 volumes, and its philoſophical apparatus is by far the largeſt in the United States. You may ſee a particular account of it in the laſt edition of Dr. Morſe's Geography.

The medical lectures, or rather the medical ſchool, ingrafted on this univerſity, is of no longer date than 1783, although this univerſity, originally called *Havard College*, was founded in 1630. Medical ſtudents come from diſtant ſtates, and even from Canada, to attend the medical lectures in this place. —— Nichols, Eſq. member of parliament, ſon of Dr. Frank Nichols, and grandſon of Dr. Mead, has juſt preſented our medical ſchool with his father's collection of anatomical preparations. Some curious repreſentations in wax have alſo arrived from Italy, ſo that the medical branch is in a very flouriſhing condition.

The univerſity of Cambridge is three miles from Boſton, and is remarkable for the beauty and healthfulneſs of its ſituation: It is intimately connected with the government of the commonwealth, for the governor, the council and ſenate of the commonwealth, together with the clergy of Boſton, and the ſix neighbouring towns, are, ex officio, the governors of it. The ſix other colleges in New England have grown out of this as branches from a trunk.

Sept. 1800. AN AMERICAN.

Any

Any thing which has a tendency to cure or even to relieve perſons afflicted with Epilepſy, is entitled to attention; the following lines on the ſubject are quoted from LALANDE. "There was lately brought to Citizen PORTAL, a young lady who was every day attacked by violent epileptic fits. They began in one of her toes; which circumſtance ſuggeſted to that able anatomiſt the idea of cutting the nerve, for the purpoſe of interrupting the communication: but he began by the application of *opium* to the nerve; and that alone proved ſufficient to effect a complete cure."

A very curious and ſcientific paper has appeared in the laſt volume of the Philoſophical Tranſactions of the Royal Society of London, by Mr. ASTLEY COOPER, ſurgeon, on the effect produced on the ſenſe of hearing, by a perforation or entire loſs of the *membrana tympani (drum* of the ear). It has generally been imagined that ſuch an accident would be attended with complete deafneſs, but ſeveral caſes here related, ſhew that the loſs of this ſenſe is but very partial, and ſometimes even ſo little as to produce but ſlight inconvenience. A perforation of this membrane is indicated when air or ſmoke can be driven from the mouth through the external ear.

Dr. GUTHRIE, of St. Peterſburg, in a letter to Profeſſor DUNCAN, of Edinburgh, mentions a curious remedy, which has performed the cure of a dropſical caſe, which was, to ſwallow daily a table-ſpoonful of common ſand. This remedy was found to purge pretty briſkly, which was followed by a relief of all the ſymptoms.

VACCINE INOCULATION.

We obſerve that in ſome large cities the Faculty have been induced to ſign a public teſtimonial of their approbation of the Vaccine Inoculation. The names of theſe Gentlemen in the Town of LEEDS, and Cities of DURHAM and CHESTER, have come to our hands, and we have great pleaſure in ſubjoining them.

IN LEEDS BY

Stanhope Baynes, M. D.
Robert Daviſon, M. D.
Benjamin Hird, M. D.
R. W. D. Thorp, M. D.
Joſhua Walker, M. D.
Obadia Brooke, Surgeon.
Thomas Chorley, Surgeon.
T. A. Coates, Surgeon.
Sim. Dickenſon, Surgeon
Wm. Dodſworth, Surgeon
William Hey, Surgeon
William Hey, jun. Surgeon
Maurice Logan, Surgeon
John Moxon, Surgeon
Benj. Muſgrave, Surgeon
Tho. Parkinſon, Surgeon
John Robinſon, Surgeon
Thomas Ruſby, Surgeon
Matthew Shirtliffe, Surgeon
John Soper, Surgeon
James Tatham, Surgepn
Thomas Teale, Surgeon

IN DURHAM BY

G. Cayley, M. D.
Potts and Clifton, Surgeons
J. James, Surgeon
W. Green, Surgeon
W. Ward, Surgeon
G. Fothergill, Surgeon
W. Ruddock, Surgeon
——Nelſon, Surgeon

In

In Chester by

William Currie, M. D.	P. Wilkinſon, Surgeon
William Houghton, M. D.	C. Tomlinſon, Surgeon
W. M. Thackeray, M. D.	Geo. N. Hill, Surgeon
Jas. Arden, M. D.	John Harriſon, Surgeon
D. Orred, Surgeon	J. Okell, Surgeon
G. Rowlands, Surgeon	W. Connah, Surgeon
S. Freeman, Surgeon	Chriſt. Buck, Surgeon
Geo. Harriſon, Surgeon	J. M. Aſſheton, Surgeon

Meetings of the Faculty have alſo been held at *York*, *Hull*, *Birmingham*, and ſome other places, and a ſimilar reſolution adopted.

Notice reſpecting a new Pharmacopœia, by Mr. Reece, Fellow of the Royal College of Surgeons in London, and late domeſtic Surgeon and Apothecary to the General Infirmary at Hereford.

To the Editors of the Medical and Physical Journal.

Gentlemen,

THE preſent melancholy declining ſtate of almoſt every charitable public inſtitution for the relief of the diſeaſed poor in this kingdom, through the unparalleled preſſure of the times, has induced me to offer to the phyſicians and ſurgeons of thoſe inſtitutions, a collection of cheap officinal and extemporaneous Recipes, entitled, "The Medical and Chirurgical Pharmacopoeia for the Uſe of Hospitals, &c." which, through the medium of your very valuable Publication, I beg leave to recommend to the notice of the medical tribe. Theſe medicines, if adopted, will reduce the expence of the Diſpenſary in the immenſe proportion of eighty per cent. and experience warrants me in aſſerting them to be equal in efficacy to thoſe of the moſt expenſive claſs.

Although I have more particularly publiſhed this work for the uſe of hoſpitals, &c. I flatter myſelf it will be found of equal utility in private practice, more eſpecially to thoſe gentlemen who exerciſe, at very inadequate ſalaries, the offices of Surgeons and Apothecaries to pariſhes; the preſent expenſive formulæ preventing their doing juſtice to the unfortunate objects labouring under the complicated evils of poverty and diſeaſe.

It was my intention to have annexed caſes of the ſucceſs of each particular medicine, which I relinquiſh from the great augmentation it would be to the ſize and conſequent price of the book; but I beg to aſſure the Faculty, that they have ſeverally undergone the teſt of experience with the moſt flattering effect.

I am, &c. &c.

London, Nov. 13, 1800. RICHARD REECE.

Mr. Stephen Hammick, Member of the Royal College of Surgeons, London, and Aſſiſtant Surgeon to the Royal Hoſpital, Plymouth, propoſes, on Monday the 5th of January, commencing a Courſe of Lectures on the Principles, Practice and Operations of Surgery. Particulars known at his houſe, Parade, Plymouth.

Dr.

Dr. HARRINGTON has in the preſs, and will ſpeedily publiſh, ſome Experiments and Obſervations on VOLTA's Galvanic Pile, clearly elucidating all the phenomena.

The *Medical and Physical Journal* continues to be tranſlated into German, and re-publiſhed at Leipſic, by the bookſeller Sommer. We are informed the Tranſlator is Profeſſor KUHN of Leipſic.

NEW MEDICAL PUBLICATIONS IN NOVEMBER.

A Compendium of the Anatomy of the Human Body, illuſtrated by nearly 700 Figures, copied from the moſt celebrated Authors, and from Nature, by ANDREW FYFFE, 3 vol. 4to. 5l. 5s. Longman and Rees.

Diſſertations on Inflammation. 1. On the Laws of Animal Economy; 2. On the Hiſtory, Cauſes, Conſequences, and Cure of Simple Inflammation; 3. On the Phagedenic, and ſome other Species of Inflammation; 4. On the Sporigoid Inflammation; 5. On Scrophulous Inflammation; 6. On the Cancerous Inflammation. By JOHN BURNS, Surgeon, Glaſgow, 2 vol. 8vo. 14s. boards. Longman and Rees.

An Eſſay on Phlegmatia Dolens, including an Account of the Symptoms, Cauſes, and Cure of Peritonitis Puerperalis, and Conjunctiva, &c. &c. by JOHN HULL, M. D. 8vo. 6s. 6d. boards. Bickerſtaff.

To CORRESPONDENTS.

The Editors conſider themſelves under much obligation to I. G. *for his very ſenſible remarks. He may have obſerved that the laſt Index was more full than the two former ones; an arrangement has however been made, by means of which the future Indices will in all reſpects be full and ſatisfactory. The number of pages in the books reviewed ſhall be added. The ſucceſſion of papers on the ſame ſubject will always be attended to, provided all which appear, are in the poſſeſſion of the Editors when the Number of the Journal is put to preſs. The other obſervations of* I. G. *will not be neglected; and the Editors, in concluſion, wiſh him to make his promiſed communications, the value of which they anticipate by that of his preſent Letter.*

Communications are received from Dr. PEARSON *and Mr.* RING, *as are ſeveral Hints and Improvements, all of which we are obliged to poſtpone at preſent.*

ADDENDA.

To Mr. Veitch's Caſe, p. 513, towards the concluſion of the caſe, and after the words, preſervation of the ſcalp, add, "This man was perfectly cured within ſix weeks, and diſcharged in as full poſſeſſion (ſetting aſide the local deprivation of ſkull) of his mental and bodily powers as he had been at any time prior to the date of the accident.

"*P. S.* Cow-pox Inoculation is extending itſelf in the Navy, and is much encouraged by the Lords of the Admiralty."

END OF VOL. IV.

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